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PREMIER 100 COVERAGE More than 500 CIOs and other top IT executives gathered last week at *Computerworld*'s Premier 100 IT Leaders Conference. Coverage of their contributions shared and experiences bared begins on Page 14.

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MARCH 3, 2003 • VOL. 37 • NO. 9 • $5/COPY

BEA Unifies Its Software Development Environment

Upgraded version of WebLogic suite converges integration and building of homegrown apps

BY CAROL SLIWA

To kick off its annual eWorld conference, BEA Systems Inc. today will unveil beta versions of its new suite of WebLogic software products, including its application server, enterprise portal and integration broker technologies.

But analysts predicted that companies will be most interested in the suite's upgraded WebLogic Workshop, since the new tool provides a unified interface for developing to any of the WebLogic products.

"That's the right direction," said Bob Carasik, enterprise architect at the IT arm of Wells Fargo & Co. in San Francisco. "We're glad to see they're adding new layers of functionality on top of the application server. They have to move up the stack, because application servers are going to become a commodity."

The first version of WebLogic Workshop, which shipped last year, was restricted to building Web services. The new version has been extended to let developers build custom applications, create portals, integrate applications and manage business processes and trading partners, said Chet Kapoor, vice president and general manager of San Jose-based BEA's integration group.

WebLogic Workshop has also been expanded with more controls to remove the complexity of building applications that rely on Java 2 Enterprise Edition technologies, Kapoor added.

"This is a very substantial piece of work," said John Rymer, an analyst at Cambridge,

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INSIDE

IBM's announcement of enhancements to its WebSphere Business Integration software coincides with the BEA event. **Page 6**

CRM Analytics Starts to Pay Off for Users

Siebel, other vendors put priority on built-in tools after slow start

BY MARC L. SONGINI

The use of analytical customer relationship management software is still in its infancy. But some companies that have been willing to give the technology a shot say their investments are paying off.

For example, Honeywell Aerospace is already seeing a return on its investment in the analytical CRM applications it installed three months ago to help its sales force manage customer accounts, said Darryl Carroll, director of sales and marketing processes at the Honeywell International Inc. subsidiary.

Phoenix-based Honeywell Aerospace, which makes aircraft parts, is using Siebel Systems Inc.'s CRM tools. Sales personnel can now use a dashboard interface to look at customer data across the company's various business units to identify selling opportunities and proactively address potential problems, such as issues related to specific parts, he said.

Carroll declined to disclose how much the software cost, but he said Honeywell Aerospace has already recouped its investment through productivity gains. Previously, the company's sales force had to

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CRM ANALYTICS IN ACTION

To learn about how Honeywell Aerospace's analytical CRM system works, see page 12.

ANDREW SKWISH

Follow THE Money

Choosing a strategic vendor is far from elementary. It's a long-term commitment that involves a lot more than the technology you buy. Before you tie your company's fortunes to those of a supplier, it's critical to investigate thoroughly and learn as much as you can about your would-be partner's financial history and prospects. We offer 10 ways to assess the financial health of IT vendors. SEE PAGE 35.

IBM Defends Pricing Model

Plans to keep, improve mainframe Workload License Charge

BY JAIKUMAR VIJAYAN

IBM remains fully committed to its Workload License Charge mainframe software pricing model and will continue to try to make it easier for users to implement it. That was the message delivered by an IBM executive at the Share large-systems user conference in Dallas last week.

IBM announced WLC in October 2000 along with its 64-bit zSeries mainframes. Under the pricing model, IBM z/OS users pay for software based on the average size of their workloads and not on the overall system capacity.

Despite the promised benefits, users have complained that WLC is hard to implement and understand [QuickLink 32381]. IBM itself has acknowledged that the model isn't for everyone and requires

IBM, page 49

NEWSPAPER

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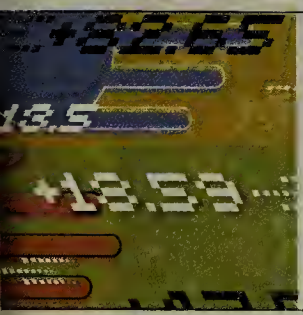

Trades at Top Speed

In the Technology section: Straight-through processing systems could save financial services companies billions of dollars. But integrating trade-matching systems requires both automating manual processes and creating a complex middleware layer. **Page 21**

Drawing a Crowd

In the Management section: Too many companies get caught up in the hoopla surrounding portal technology, focusing mostly on implementation and integration issues. Here's how to bring the focus back to usability. **Page 38**

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The Peril Within

MOBILE/WIRELESS: Security begins at home. Many employees build their own wireless LANs, but that can mean big trouble for companies. Henry Feusi, a managing consultant at New York-based Predictive Systems Inc., says these setups can be open windows for intruders. **QuickLink 36643**

Behavioral Rules vs. Signatures

SECURITY: Both technologies have their pros and cons, which is why security expert Yona Hollander recommends using both to protect data in the enterprise. **QuickLink 36139**

IE Web Controls in VB.Net

DEVELOPMENT: A simple example of how to use the TreeView and TabStrip Internet Explorer Web Controls with Visual Basic .Net. **QuickLink a2930**

What They Can't Find Can Get You 20 Years

STORAGE: The area of records retention and destruction has become something of a minefield. IT staff must use all of their resources to navigate it safely and lawfully. **QuickLink 35933**

'It's the Restore, Stupid!'

STORAGE: You can do the best backup in the world, but if you can't recover your data quickly and with 100% certainty, it's for naught, says LiveVault Corp.'s CEO. **QuickLink 36219**

What's a QuickLink?

On some pages in this issue, you'll see a QuickLink code pointing to additional, related content on our Web site. Just enter that code into our QuickLink box, which you'll see at the top of each page on our site.

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The Online Store
QuickLink a2420

AT DEADLINE

IBM Signs $1B IT Services Deal

IBM announced a six-year IT services deal valued at about $1 billion with AXA Group, a Paris-based insurance and financial services firm. The companies said IBM will consolidate AXA's servers, mainframes and storage devices into an "on-demand" computing installation. But they added that AXA will retain full control of its IT infrastructure and workers.

IETF to Research Antispam Measures

The Internet Engineering Task Force (IETF) said it has set up an antispam research group to investigate new ways to help users block unsolicited commercial e-mail. The group will explore the development of a common architecture for detecting spam and enforcing user consent policies. It will also consider possible antispam legislation.

Sun Plans CPUs With Multiple Cores

At a meeting with financial analysts, Sun Microsystems Inc. outlined plans to develop chip multithreading processors, starting with an UltraSPARC IV device due later this year. Sun said it will put multiple CPU cores that can each simultaneously process multiple tasks on a single piece of silicon. IBM last month said it will deliver similar processors next year [QuickLink 36523].

Short Takes

EMC CORP. in Hopkinton, Mass., added Gigabit Ethernet support and new disk drives to its Symmetrix 8000 storage arrays and announced models optimized for use with mainframes. . . . LUCENT TECHNOLOGIES INC. in Murray Hills, N.J., signed an agreement in principle to settle an accounting probe by the Securities and Exchange Commission.

IBM Upgrades Business Integration Technology

WebSphere tools reduce need for Java programming skills

BY MARC L. SONGINI

IBM IS ENHANCING its WebSphere middleware technology in an effort to simplify the task of creating and monitoring data and business-process workflows through corporate systems.

This week, IBM will announce an upgrade of its WebSphere Business Integration software aimed at letting users model business processes that go across different applications without needing to have special Java coding skills. It also plans to roll out improved development tools and increased Web services support (see box).

To widen the modeling and monitoring capabilities in WebSphere Business Integration, IBM is embedding technology it gained in September when it acquired Holosofx Inc., a business integration software vendor in El Segundo, Calif., said Sean Poulley, director of WebSphere business development at IBM.

Previously, the Holosofx applications required a customized link to WebSphere. They will still be sold separately, but Poulley said the Holosofx technology will now be integrated with WebSphere Business Integration Server Version 4.2, which is due later this month.

Closing the Loop

The Business Integration Modeler will let users outside of IT create blueprints of business processes that can be handed off to developers for implementation, IBM said. Companies can also use the modeler with the Web browser-based Business Integration Monitor to develop systems with built-in thresholds and alerts that provide feedback as business processes are executed.

"If I've got the modeling tool integrated with the monitoring tool, I get a closed loop," Poulley said. For instance, he said, a manufacturer could create a workflow process to restock its inventories and let end users know the cost of items as they're being procured.

Robert Catterall, director of strategic technology for the e-commerce division at CheckFree Corp. in Norcross, Ga., said the capabilities being added by IBM could be useful in involving less technically skilled workers in application integration projects.

"There are people who know Java well, and there are people who understand business processes well, and people in one of these groups are very often not found in the other," Catterall said. CheckFree uses IBM's DB2 database and is contemplating a WebSphere installation, he noted.

IBM is making the right moves by starting to combine its various integration products and giving them common tools and user interfaces, said Sharyn Leaver, an analyst at Forrester Research Inc. in Cambridge, Mass. But IBM has yet to standardize on a single runtime engine for its WebSphere application and integration servers, she added.

PRODUCT FEATURES

- Integrated business-process modeling and monitoring tools that IBM bought in September.
- Improved development tools designed to reduce the time it takes to set up data workflows.
- IBM's Eclipse framework programming environment to provide a consistent interface.
- Support for publishing business processes as Web services.

Doug Brown, director of marketing for WebSphere integration, acknowledged that IBM supports multiple runtime engines within the sprawling WebSphere line. But by year's end, it plans to consolidate on one runtime technology so applications will be reusable, Brown said.

Cisco Builds Rugged Switch To Link Factory, Back Office

BY MATT HAMBLEN

In a move aimed at unifying factory-floor networks with the ones in corporate back offices, Cisco Systems Inc. will unveil today at the National Manufacturing Week show in Chicago a ruggedized line of switches based on IP and Ethernet.

The Catalyst 2955 series is designed for use in factories and in utility, transportation and military settings, where temperatures, humidity, dust and vibrations are more extreme than they are in regular business environments, Cisco officials said. The devices, which are about one-third as big as Cisco's regular switches, are shipping now and are priced from $2,100 to $3,600.

CISCO'S CATALYST 2955 is about one-third the size of its regular switches.

The 2955 series introduces the first rugged Ethernet switches developed by a major networking equipment vendor, said Harry Forbes, an analyst at ARC Advisory Group Inc. in Dedham, Mass. He noted that Cisco is rolling out the switches at a time when factory-floor devices that control production processes, robots and other machines are starting to be equipped with Ethernet interfaces instead of manufacturing-specific technologies.

The biggest supplier of rugged Ethernet switches for factories is Hirschmann Electronics GmbH in Neckartenzlingen, Germany, Forbes said. Switches accounted for about 8% of the 300,000 Ethernet-ready devices sold for factory use last year, ARC said.

For companies that have installed Cisco products and Ethernet technology in their main corporate networks, the 2955 could help extend to the manufacturing realm the quality-of-service features and other capabilities that are built into the Catalyst technology, said Joel Conover, an analyst at Current Analysis Inc. in Sterling, Va.

"You're going to be able to monitor and control manufacturing from the core network," Conover said. He added that many mainstream IT managers will be more willing to accept the 2955 switches than devices from specialty vendors like Hirschmann because Cisco's technology is so widely deployed and accepted.

"I won't have to sell people on the brand of the switch," said Carl Staab, manager of communications technology at Emerson Process Management in Pittsburgh. Emerson has been beta-testing the 2955 series since January and hopes to resell the Cisco switches with process control equipment that it markets to water and sewer utilities, he said.

The 2955 series also has 12 Ethernet ports — twice what the competition offers, Staab said. Another advantage over existing factory-floor switches is the 2955's ability to quickly alert workers to network problems through an external light on the device, he said.

VIDEO VAULT

Cisco upgrades its technology for caching high-bandwidth data at network edges:

QuickLink 36726
www.computerworld.com

Navy's Massive Intranet Rollout OK'd

Some users still cite costs, other concerns

BY DAN VERTON

The U.S. Navy confirmed last week that the Pentagon has given it the go-ahead to move as many as 310,000 Navy and Marine Corps IT users to the Navy/Marine Corps Intranet (N/MCI).

The decision comes after months of operational testing that was required by Congress before it would allow the Navy to proceed beyond a 60,000-user cap that it imposed after concerns surfaced about the program's technical feasibility and cost [QuickLink 30106]. However, after the successful completion of the testing phase, the Navy received permission to proceed with all 160,000 of the N/MCI seats that had been previously approved and was authorized to order an additional 150,000 N/MCI seats from its prime contractor, Plano, Texas-based Electronic Data Systems Corp.

N/MCI is an IT outsourcing project, often referred to as seat management, intended to give the Navy and Marine Corps secure, universal access to integrated voice, video and data communications. It's also designed to provide pier-side connectivity to Navy vessels in port and, when completed, will link more than 310,000 desktops across the U.S., Puerto Rico, Japan and Cuba.

N/MCI Seat Deployment

- Currently deployed: 59,000
- No longer on hold: 100,000
- Newly authorized: 150,000
- Manpower: 300 EDS workers, plus Dell assistance
- Deployment rate: 1,000 desktops per day
- Completion date: End of 2003

Although most of the focus of the N/MCI deployment remains on support units, Vincent Madsen, a 24-year EDS veteran who recently took over as client delivery executive for the N/MCI program, said the potential for military conflict in Iraq does play a role in planning for the future. "We have to work closely with all the units to make sure we're not going to get in the way," he said. "I don't anticipate any delays, but we may move some schedules around."

For now, N/MCI is moving full steam ahead. "The results from four months of testing clearly demonstrated that the N/MCI is ready to move to the next level," Rear Adm. Charles L. Munns, director of the N/MCI project, said in a statement released by the Navy.

"We're now moving at light speed to get all of this deployed as contracted by the end of the year," said Madsen, referring to all 310,000 seats.

EDS has dedicated more than 300 employees to deployment and installation and is relying on Dell Computer Corp. for hardware delivery as well as initial build, configuration and customer support for the N/MCI desktop Windows environment, said Madsen. "We're going to rev up to the point where we'll be able to deploy 1,000 desktops per day across the entire infrastructure at multiple locations," he said.

Hurdles Remain

But some N/MCI users said they continue to struggle to maintain productivity and keep N/MCI costs down.

A San Diego-based Naval IT manager involved in the project said N/MCI seats are costing his customers $3,000 to $6,000 per seat per year. The cost is so high that some Navy organizations can't afford N/MCI workstations for their contractor support personnel, he said. He claimed that using another contractor, he could supply for $570,000 what EDS is charging a Navy unit $2.5 million for.

Another manager from the Naval Region Southwest, which includes 10 bases in California and one in Nevada, said his users continue to deal with "nothing but chaos, poor communication and lack of any deliverables."

One organization has been waiting more than a year to get a critical application shifted to N/MCI, the manager said. There has also been no accountability for missed schedules or critical application or system outages, the manager added.

The Navy and EDS have repeatedly downplayed such problems, characterizing them as natural growing pains and going so far as to accuse some civilian Navy employees of having an agenda to kill the program. ◗

COLLAPSED TALKS

EDS ends negotiations for a multibillion-dollar contract with French firm Alstom:

QuickLink 36654
www.computerworld.com

UPS Readies Wireless Upgrade in U.S.

50,000 drivers to get new info terminals

BY BOB BREWIN
LOS ANGELES

United Parcel Service Inc. will deploy higher-speed wireless services to its U.S. delivery fleet this year, starting with retrofitting 4,500 driver data terminals with modems that support AT&T Wireless Services Inc.'s General Packet Radio Service (GPRS) network.

The retrofitting move is a large-scale test of the GPRS mobile data service that will be followed by a rollout of new terminals to UPS's 50,000-plus drivers in the U.S. Tamara Schwartz, the company's director of global network services, said at a wireless IT conference held here last week by Gartner Inc. that UPS next month will detail its plans for deploying the more advanced information terminals.

Schwartz wouldn't disclose any specifics about the new terminals, which will be made by Holtsville, N.Y.-based Symbol Technologies Inc. But a spokeswoman for Atlanta-based UPS said the terminals will be equipped with GPRS modems or with ones that support the rival Code Division Multiple Access (CDMA) wireless network technology.

Improved Throughput

For UPS drivers, the rollout should mean much better data throughput. For example, the AT&T Wireless network supports data transmission rates of up to 40K bit/sec., compared with a speed of about 9.6K bit/sec. for the network services provided by Reston, Va.-based Motient Corp. that are now used in the U.S.

The planned U.S. project follows a deployment last year of GPRS-enabled terminals to 15,000 UPS drivers in Europe, where the company uses wireless network services provided by the T-Mobile division of Deutsche Telekom AG in Bonn. T-Mobile's GPRS network runs at 20K to 40K bit/sec. and replaced a 9.6K bit/sec. Mobitex network also operated by T-Mobile.

Schwartz said the higher data rates have helped UPS better manage "on-demand" delivery services in Europe, where drivers typically respond to requests for pickups instead of making scheduled stops as they do in the U.S.

UPS and Memphis-based rival FedEx Corp. both said last July that they planned to standardize their global wide-area wireless architectures on GPRS technology wherever it's available. But the two companies also acknowledged that they would have to use other wireless standards in some locations [QuickLink 31154].

UPS's Wireless IT Strategy

- Equip 70,000 drivers worldwide with wide-area wireless services.
- Equip 4,500 driver terminals in the U.S. with GPRS modems as a test and then roll out new terminals to all of its U.S. drivers.
- Use a combination of GPRS and CDMA networks to provide full wireless coverage in the U.S.
- Start a U.S. rollout this year of a bar-code sorting system based on 802.11b wireless LAN and Bluetooth technology.
- Finish the bar-code sorting installation here next year and start a rollout to operations in the rest of the world in 2005.

At last week's conference, Schwartz said that's still part of the plan at UPS. The company will rely on CDMA networks that are operated by carriers such as Verizon Wireless and Sprint PCS Group to augment GPRS in the U.S., because Redmond, Wash.-based AT&T Wireless doesn't provide coverage in all parts of the country, she said.

Gartner analyst Ken Dulaney said UPS has no choice but to go with both GPRS and CDMA in the U.S. In contrast, European countries offer companies GPRS as a single wireless standard, he noted.

The AT&T Wireless GPRS network will be tested at package-delivery hubs with more than 60 drivers, UPS said. ◗

BRIEFS

Ford to Slash IT Budget by $300M

Ford Motor Co. said it's cutting its IT budget by about $300 million as part of a cost-reduction initiative that began early last year. The cutbacks will lower Ford's IT spending by 20% and may include layoffs of some of its 2,800 contract IT workers, a spokesman said. He added that Ford, which has about 6,000 IT staffers, is evaluating which projects will be affected by the cuts.

HP Results Hit by Weak U.S. Sales

Hewlett-Packard Co. reported lower-than-expected financial results for its first quarter and pinned most of the blame on continued weak IT spending in the U.S. HP said it had a $721 million profit on revenue of $17.9 billion in the quarter, which ended Jan. 31. HP didn't disclose comparative year-earlier numbers that take its acquisition of Compaq Computer Corp. into account.

CERT, IT Vendors Warn of SIP Flaw

The CERT Coordination Center in Pittsburgh warned about a software flaw that could affect networking devices with support for the Session Initiation Protocol (SIP). Analysts and IT vendors said users haven't reported any problems as a result of the flaw. But vendors such as Cisco Systems Inc. and Nortel Networks Ltd. said some of their products are vulnerable, and they have made patches available.

Short Takes

DELL COMPUTER CORP. CEO Michael Dell said at a conference that the company will announce its first Dell-branded printers this month. . . . DIVINE INC., a Chicago-based software and IT services vendor, filed for Chapter 11 protection and said it's exploring a possible sale of its assets.

MARK HALL ▪ ON THE MARK

IT Digital Dashboard To Get Face-Lift . . .

. . . and improved integration with major applications in Version 5.0 of Kintana Dashboard slated for June, sources said. Kintana Inc. in Sunnyvale, Calif., whose eponymous IT capacity planning and resource management product has attracted a growing number of users in the past year, will begin beta-testing its anticipated upgrade next month. The company is adding adapters for Microsoft Outlook and PeopleSoft. It also plans to improve the dashboard's integration with Microsoft Project. Expect to see some modifications to the user interface, such as approval buttons appearing at both the top and bottom of the scrolling screens. William Farrow, CIO at the Chicago Board of Trade and a user of Kintana Dashboard, said an adapter to **the general ledger portion of PeopleSoft "would be something really hot"** for his company because it has done little customization to its PeopleSoft application and would be able to quickly adopt the upgrade and roll IT project changes into the corporate general ledger. ▪ Although CRM giant **Siebel Systems Inc. is getting knocked around** these days by its much smaller ASP competitors, such as SalesForce.com Inc. and UpShot Inc., larger companies still prefer it. At least that's what CIOs were saying at *Computerworld*'s Premier 100 IT Leaders Conference last week. Even Jay Gardner, CIO at BMC Software Inc. in Houston, whose company bombed its first two attempts to install Siebel, said BMC evaluated the ASP approach after two failed Siebel installs, but "we felt the **ASP model would not give us the control, agility or scalability** to go where we wanted to go." Third time being the charm, BMC now has 3,500 users of Siebel 6.3, and Gardner said the company will upgrade to Version 7.05 this summer. In fact, when the upgrade is complete, the Siebel application running on an Oracle data warehouse will be the primary repository for all corporate data. Maybe "the end of software," a SalesForce.com marketing mantra, isn't so nigh after all. ▪ **Hype prepares us for the future**, suggests Tim Howes, CTO at Opsware Inc. in Sunnyvale, Calif. But what if the future is already here? Companies like IBM, Hewlett-Packard Co. and Sun Microsystems Inc., with their variations on utility computing, "are marketing their vision of what data center computing will look like in three to five years," he says. Howes doubts that it will resemble what the major vendors are betting on. That's because these Big Three vendors have all built their utility model around big iron. But Howes pooh-poohs that idea. **"It's more expensive taking the mainframe approach** than going down to [computer retailer] Fry's and buying another inexpensive server," he claims. "They're more reliable and just plain cheaper, too." Furthermore, he argues, a lot of what the Big Three are selling already exists, such as load-balancing and shared-server pools, and companies are already handling planned surges (Super Bowl-type events) and unplanned surges (such as 9/11) in resource demand. His view, of course, is tainted by a different sales pitch, which is that Opsware system management software lets you manage scads of small servers with far fewer resources. Howe boasts that a single sysadmin can "easily handle 100 machines" with agents called Intelligent Software Modules (ISM). These ISMs have to be written for each program running on the server. Currently, Opsware has 60 ISMs, but it will have a "couple hundred" by year's end, Howe says. ▪ You might want to **get some control over all those Fry's shoppers** by installing Frictionless Sourcing 3.0, a policy-based procurement package that helps manage spending that doesn't always go through the purchasing department. Available this week from Frictionless Commerce Inc. in Cambridge, Mass., the upgrade includes a handful of new modules, including spend analysis and workflow management. It can also do demand aggregation so large companies with multiple locations buying the same products can build a single large purchase order for a better deal. And global companies now can have workers review a single purchase in their local languages and currencies. ◗

Get Wired

Practical Sales Tools Inc. in Plymouth Meeting, Pa., this week ships the X3 release of Wired-Contact, which gives remote sales and field representatives access to ACT 5 or 6 central databases at $199 per user. This version adds support for Pocket PCs, integrates with HTML editors and increases the security features.

Sockeye Upgrades WAN Routing Tools

BY MATT HAMBLEN

Sockeye Networks Inc. today will release an upgrade of its wide-area network routing-optimization software that's designed to support the complex network billing models used by companies that rely on multiple Internet service providers (ISP).

With the new capabilities built into Version 3.0 of Sockeye's GlobalRoute technology, companies that use more than one ISP can automatically set up optimal routes for network traffic, based on the terms of their contracts. Network managers can use the information to move traffic to faster or cheaper links and to help renegotiate ISP contracts when they come up for renewal, Sockeye officials said.

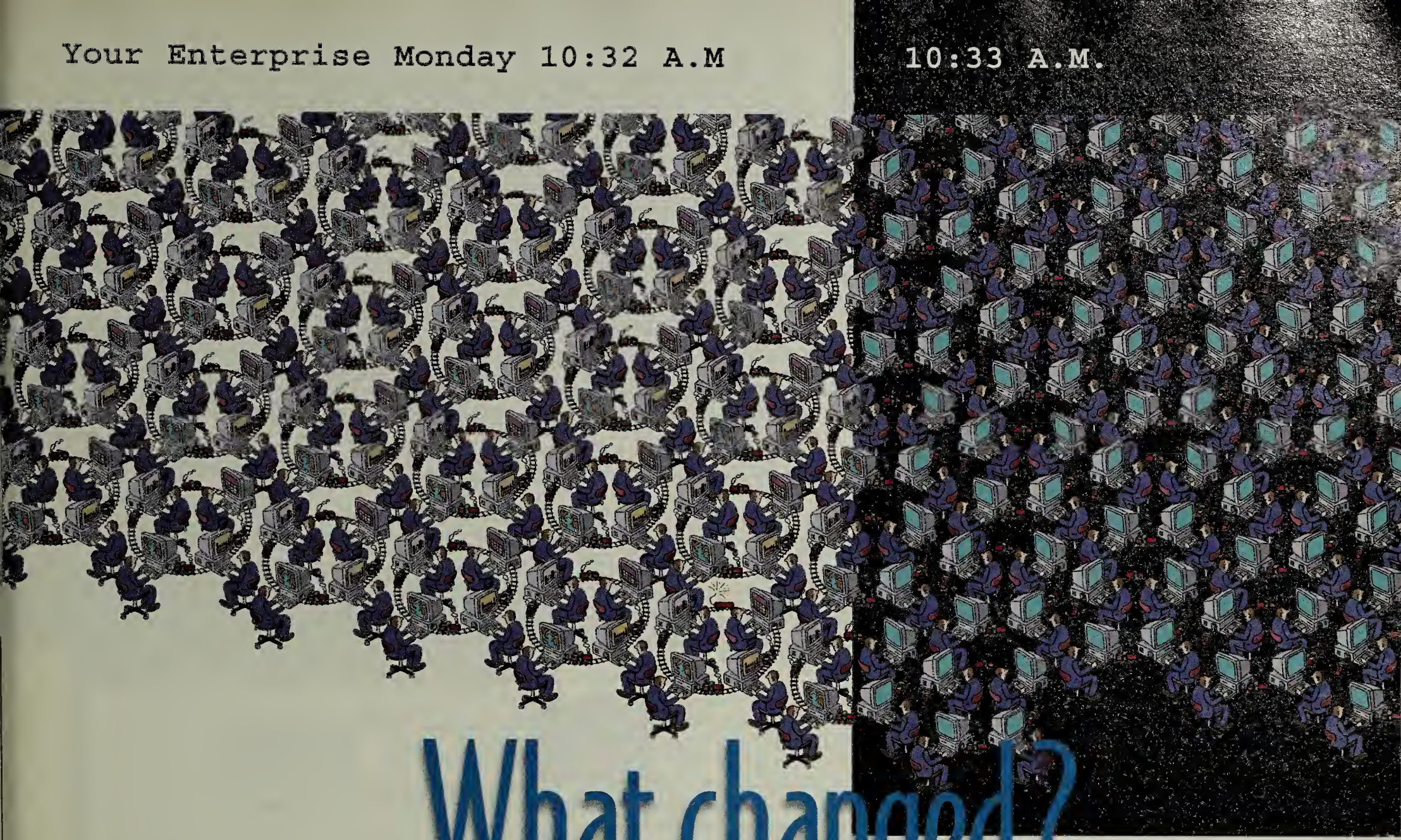
The Waltham, Mass.-based company is the second vendor in the emerging market for route-control technology to announce an upgrade in recent weeks. Fremont, Calif.-based netVmg Inc. last month shipped a new release of its Flow Control Platform software and added a pair of low-end route-control appliances.

Other companies that offer technology to help users find the fastest and cheapest routes for data traffic over WAN links include RouteScience Technologies Inc. in San Mateo, Calif., and Proficient Systems Inc. in Atlanta. But Sockeye is the only vendor offering those capabilities as a managed service, said Charles Rutstein, an analyst at Forrester Research Inc. in Cambridge, Mass.

Sockeye installs its route-control appliances at customer sites and manages them for monthly fees that start at $4,000.

Digital West Networks Inc., an IT hosting company in San Luis Obispo, Calif., has been using GlobalRoute 3.0 for about a month to help set up optimum routing for the data that's handled by its four ISPs, said Chief Technology Officer Josh Richards.

"It's in our interest to get our customers' traffic pushed as fast as possible, and this software has provided a differentiator for us," he said. ◗



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Serial SCSI Promises Faster I/O in Servers

Drive vendors set shipment plans as spec OK nears

BY LUCAS MEARIAN

AN IT STANDARDS body is close to ratifying a new serial interface specification for SCSI disk drives that's expected to speed up I/O throughput in servers and could eventually challenge Fibre Channel technology's share of the high-end disk array pie.

The serial-attached SCSI specification is expected to be approved during the second quarter by the T10 technical committee of the Washington-based International Committee for Information Technology Standards. Disk makers such as Seagate Technology LLC and Maxtor Corp. last week said they plan to begin shipping serial SCSI drives to system vendors by year's end.

The IP-based technology will support faster I/O throughput than the current parallel SCSI interface does, said Gordy Lutz, a product marketing manager at Scotts Valley, Calif.-based Seagate.

Serial SCSI is expected to replace its parallel predecessor as the standard disk-drive interface in most servers as well as in workstations and low-end to midrange disk arrays, according to John Lohmeyer, the T10 technical committee's chairman.

Drive's Advantages

But the new drives will also offer faster I/O speeds than Fibre Channel devices do, Lohmeyer said. And like Fibre Channel technology, serial SCSI drives will have dual I/O ports for fail-over purposes and will support simultaneous send-and-receive operations.

Seagate, which makes about 95% of the Fibre Channel drives used in high-end disk arrays, said it expects serial SCSI and Fibre Channel to complement each other. But Milpitas, Calif.-based Maxtor is betting on serial SCSI to replace Fibre Channel disk in five to 10 years.

Because the specification supports point-to-point connections between disks and controllers through the use of so-called extenders, there should be no competing demands to slow down the flow of data, as there are on conventional system buses, said Brendan Collins, director of product marketing at Maxtor.

Lev Gonick, CIO at Case Western Reserve University in Cleveland, said the ability to open up the internal bandwidth of servers is serial SCSI's greatest potential feature for improving his school's operations.

Mark Price, director of enterprise architecture at Carlson Companies Inc., said serial SCSI will become interesting to the Minneapolis-based travel industry conglomerate "at the point when the cost of it becomes equal to or less than what we're currently using."

Carlson now uses a Fibre Channel storage-area network (SAN) with multiprotocol switches made by San Jose-based Nishan Systems Inc. to connect mirrored data centers over IP. But, Price said, "we think Fibre Channel is probably a shorter-lived technology. It's very expensive and complicated to implement."

Serial SCSI will likely become "an alternative to doing Fibre Channel in [SANs], but it's not the panacea," said Jamie Gruener, an analyst at Gartner Inc. in Stamford, Conn. "It's meant to replace parallel SCSI. It's not meant to be a complete replacement of everything."

TWO FOR ONE

Users will be able to combine serial SCSI drives and less expensive ATA devices in servers and disk arrays:

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www.computerworld.com

Storage Standards

SERIAL SCSI	FIBRE CHANNEL
■ 3G bit/sec. throughput, with 6G bit/sec. planned by 2006	■ 2G bit/sec. throughput, with 4G bit/sec. planned by 2005
■ Includes dual I/O ports	■ Includes dual I/O ports
■ Supports external cable lengths of up to 6 meters	■ Supports external cable lengths of up to 15 meters
■ Uses a direct-connect architecture with "extenders" to link multiple disk drives	■ Uses arbitrated loops or loop-switched architectures to link multiple disk drives

Veritas Upgrades Backup Software, Looks to Diversify

BY LUCAS MEARIAN

Veritas Software Corp. last week upgraded its flagship data backup technology. But Veritas, the second-largest vendor of storage management tools, is also embarking on an acquisition-fueled strategy to expand into other IT management technologies.

The plan to augment products such as its NetBackup software with new server and application management tools is aimed at helping Mountain View, Calif.-based Veritas compete against more diversified rivals such as EMC Corp., Computer Associates International Inc. and IBM.

Veritas officials said their goals are to offer IT administrators a bundled suite of management tools and increase the company's annual revenue from $1.5 billion to $5 billion over the next three years.

To some users, the plan makes a lot of sense. For example, Tom Guthrie, vice president of technology operations at Atlanta-based Cox Communications Inc., said there's definite value in the direction Veritas is taking.

"With all of our vendors, we've encouraged them to go up the value chain in areas they're good at, and we're happy to interact with them about that," Guthrie said. He recently standardized backup operations on Cox's 10TB storage-area network (SAN) by installing NetBackup.

Veritas has announced three acquisitions since November, adding products in areas such as server provisioning and application performance management (see box).

Bill Augustadt, chief technology officer at BlueStar Solutions Inc., said the ability to pool server capacity to address application needs and then monitor performance on the fly should help the Cupertino, Calif.-based application outsourcing firm more efficiently control its services according to customer needs.

"Any automation we can do will allow us to scale across platforms with fewer people to manage them," said Augustadt, who uses various Veritas products to handle data backups on a 160TB SAN.

Veritas' big task this year is to "consolidate and integrate the companies we acquired," said Jeremy Burton, the company's chief marketing officer. "But I don't think it will be technology that hinders us." If problems do arise, they most likely will be related to sales execution issues, he noted.

Anders Lofgren, an analyst at Giga Information Group Inc., predicted that other storage software vendors will adopt similar expansion plans. But, he added, "for Veritas to build credibility outside of the storage management space — that will take some time."

In January, Veritas reported a fourth-quarter net loss of $49 million on revenue of $405 million. But the company said business was better than expected, and it reported a $57 million profit for 2002 as a whole, compared with a net loss of $643 million for 2001.

NetBackup 4.5 includes a new feature called Instant Data Recovery, which lets users recover data directly from disk drives instead of from tape devices, Veritas said. The upgrade also streamlines the process of storing Microsoft Exchange e-mail attachments.

Tech Additions

Veritas has announced the following acquisitions:

PRECISE SOFTWARE SOLUTIONS LTD., which sells application performance management software; due to be completed by midyear.

JAREVA TECHNOLOGIES INC., a developer of software for remote provisioning, deployment and configuration of servers; bought in December.

STORAGE REPORTER, a data storage usage reporting tool developed by NTP Software; purchased in November.

MORE TO WORK WITH

Cox Communications says NetBackup has helped increase use of its available storage capacity:

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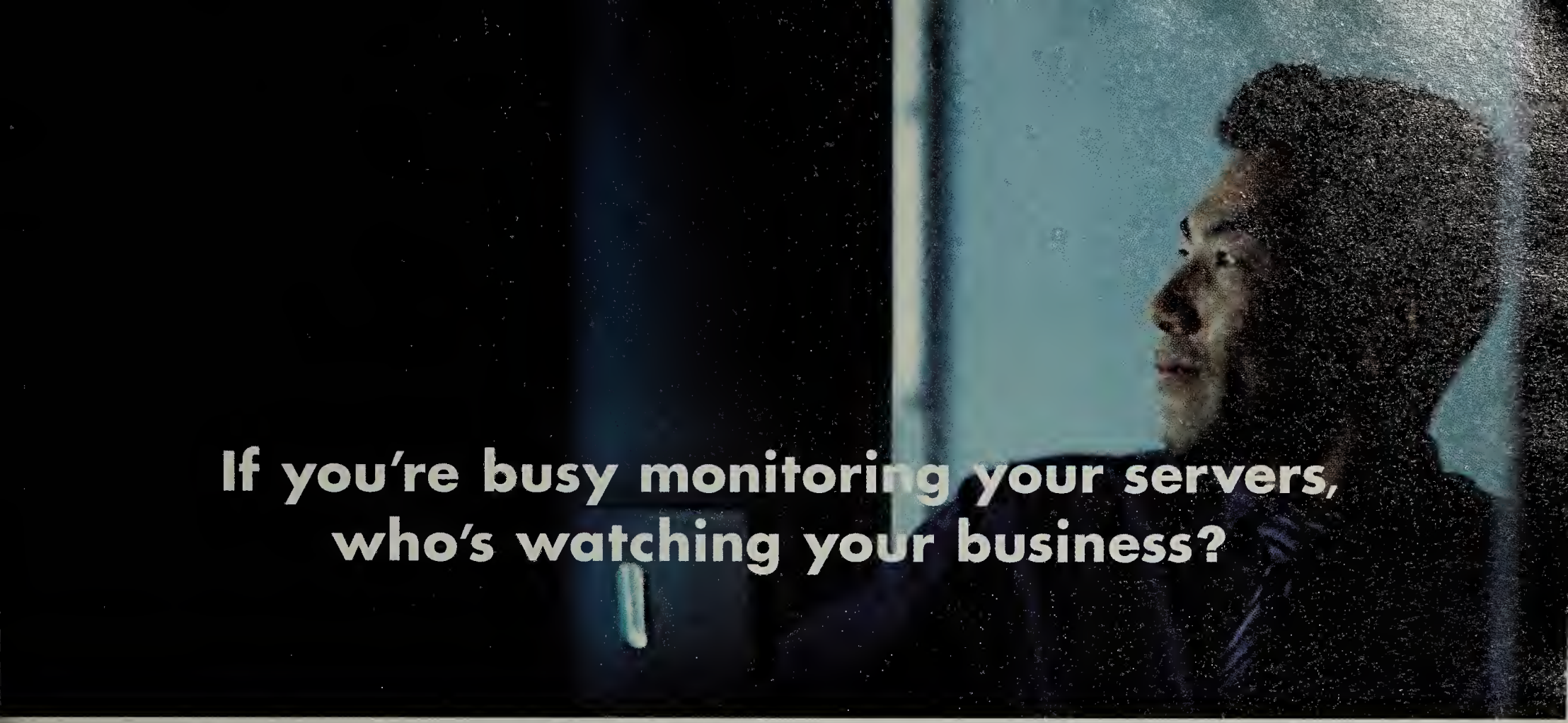

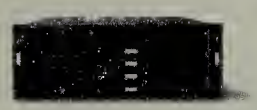

The new HP ProLiant DL740 8-way with hot-plug RAID memory.

- Ultradense 4u modular chassis with up to eight Intel® Xeon™ MP 1.5 GHz or 2.0 GHz processors
- Up to 64GB addressable memory
- Groundbreaking F8 chipset
- 6-64 bit/100 MHz PCI-X slots
- Integrated Lights-Out Standard (iLO) for Remote Server Mgmt.

The new HP ProLiant DL760 G2 8-way with hot-plug RAID memory.

- Up to eight Intel® Xeon™ MP 1.5 GHz or 2.0 GHz processors
- Up to 64GB addressable memory
- Groundbreaking F8 chipset
- 10-64 bit/100 MHz PCI-X, 1-64 bit 33 MHz slots
- Remote Insight Lights-Out Edition II (optional) for Remote Server Mgmt.

What challenges do you face today? Decreasing budgets? The lurking possibility of downtime? It's hard enough to focus on moving your business forward when you're constantly looking over your shoulder to see if everything is up and running.

Besides, that's the job of the new HP ProLiant DL700 series running Intel® Xeon™ MP processors. An adaptive infrastructure begins with these HP ProLiant servers which come equipped with tools that predict, self-diagnose and fix many fault conditions. And now with hot-plug RAID memory exclusively from HP, you can add or replace DIMMs without turning your systems off. Both work with the HP ProLiant Essentials Foundation Pack featuring Insight Manager 7 software which monitors and controls your infrastructure for maximum uptime.

At the end of the day, you'll have more control over your infrastructure, help avoid unplanned downtime and reduce overall maintenance costs. Not to mention freeing yourself up for more important things.

To learn how HP ProLiant servers can be a part of maximizing your company's uptime, download CMP's executive brief on high availability at www.hp.com/go/proliant85 or call 1-800-282-6672, option 5, and mention code YPH.

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BRIEFS

Qwest Execs Face Fraud Charges

The Justice Department said a Denver grand jury indicted four former Qwest Communications International Inc. executives on corporate accounting fraud charges. The Securities and Exchange Commission also filed civil fraud charges against the four as well as three other former executives and Qwest's current senior vice president of finance. Denver-based Qwest said it's cooperating with the probe.

Bankrupt Peregrine Turns to Mediator

Peregrine Systems Inc. said it has agreed to use a mediator to try to resolve differences with its creditors over a bankruptcy reorganization plan filed by the San Diego-based asset management software vendor. In return, the creditors will stay a motion seeking to end Peregrine's exclusive right to propose a reorganization. Peregrine sought Chapter 11 protection in September.

Microsoft Upgrades XP Rollout Tools

Microsoft Corp. updated tools that are designed to help corporate users speed up rollouts of Windows XP Professional and Office XP. The tools, available at no cost on Microsoft's Web site, include new features for testing application compatibility and scanning PCs for missing security updates. Microsoft also began beta-testing a tool kit for developing peer-to-peer applications.

Short Takes

COMPUTER ASSOCIATES INTERNATIONAL INC. plans this week to release Version 7 of its eTrust Antivirus software, which bundles together several tools. . . . ENTERASYS NETWORKS INC. in Rochester, N.H., said it has settled an accounting investigation launched by the SEC last year.

SAP Readies CRM Upgrade With Vertical Industry Focus

New apps will also include increased support for Web services, mobile users

BY MARC L. SONGINI

SAP AG is readying an upgrade of its customer relationship management (CRM) software that officials said will deliver more industry-specific functions and increased ties to other applications.

SAP plans to release the next version of its mySAP CRM software in June. As part of the upgrade, it will expand the ability of the applications to use Web services technology to take data feeds from both internal and external systems, said Peter Zencke, a member of SAP's executive board. That will let users draw on more information and better exploit analytical CRM tools to improve their interactions with customers, he said.

The new release will also include built-in business processes specific to 22 vertical industries, Zencke said. For instance, SAP plans to expand its marketing campaign management functions for companies in the consumer packaged goods market.

Seeking a Remedy

Eric Bloom, vice president of IT at Endo Pharmaceuticals Holdings Inc. in Chadds Ford, Pa., uses SAP's R/3 enterprise resource planning software and said he would like to see SAP roll out a CRM module for the pharmaceuticals industry. The ability to tie together customer data from multiple systems would be a big advantage for Endo, he noted.

Bloom said SAP has been trying to put together such a product, but he added that it's hard for vendors to create a single set of CRM applications that can meet the needs of companies with different business processes, even within the same industry. Endo currently uses some homegrown CRM tools, Bloom said.

An SAP spokesman said pharmaceuticals is one of the vertical industries that the CRM upgrade will address through functionality such as capabilities for analyzing contested charges and managing drug-sampling procedures.

SAP's increased vertical-market focus shows that it recognizes there's no such thing as one-size-fits-all CRM, said Erin Kinikin, an analyst at Giga Information Group Inc. in Cambridge, Mass. Many users have struggled to apply CRM technology to their specific business needs, she said.

MySAP CRM in particular could appeal to R/3 users because of its tight integration with SAP's back-office applications, Kinikin added.

SAP will make all its CRM functionality accessible to end users with mobile devices for online or off-line processing, Zencke said. Currently, handheld devices are limited to using SAP's sales force automation tools. The company will also make R/3 and its other business applications handheld-accessible, Zencke said.

CRM Additions

SAP said the next release of mySAP CRM will:

LET mobile devices access its full range of CRM functions.

INCLUDE more features tailored for different vertical industries.

USE Web services to take data feeds from more sources.

PRESENT data from multiple systems via a portal interface.

Continued from page 1

CRM Analytics

dig through data repositories for customer information and then dump the data into Excel spreadsheets in order to conduct analyses, Carroll said.

The analytical applications now take feeds directly from Honeywell's Siebel-based call center and sales force automation systems as well as from other data sources. In addition, the dashboard user interface is easy to use and configure, Carroll said. "We had many pessimistic people here, but now it's 'click' and take off," he added, referring to prompts that are built into the software to help automate data-analysis procedures.

CRM analytics "has been the next 'new' thing that never really happened for the past few years," said Erin Kinikin, an analyst at Giga Information Group Inc. in Cambridge, Mass. But that could change over the next couple of years, now that San Mateo, Calif.-based Siebel and other CRM vendors are moving to embed analysis capabilities into their applications, she said.

In addition to Siebel's analysis technology, PeopleSoft Inc. in December announced a marketing module with 30 built-in analytical capabilities. SAP AG said it plans to beef up the analysis features in its CRM software as part of an upgrade due in June (see related story, above).

The Mutual of Omaha Companies is in the initial phases of rolling out real-time analytical CRM software developed by San Mateo-based E.piphany Inc. The insurer has already implemented E.piphany's sales and marketing tools and is now phasing in its marketing and campaign analytics, said John O'Donovan, first vice president of e-business partnership at Mutual of Omaha.

The analytics project should be wrapped up by midsummer, O'Donovan said. When it's installed, the software will let the company use CRM analytics to modify its marketing campaigns on the fly, based on suggestions derived from individual customer profiles.

Mutual of Omaha already uses software from SAS Institute Inc. in Cary, N.C., to do data mining and customer segmentation work that can help target its marketing programs at specific groups.

But O'Donovan said the two products will complement each other. While the SAS technology addresses historical trending, E.piphany's software will be able to help call center workers make marketing decisions when they're on the phone with customers.

Analytics in Action

How Honeywell Aerospace's analytical CRM system works:

- The company has installed Siebel's analytical software on top of the vendor's sales force automation and call center applications.
- The analytical tools take information about customers from the Siebel applications and other data sources within Honeywell Aerospace.
- The tools use the data to identify sales opportunities or customers who are likely to have product issues and should be contacted proactively.
- Salespeople access the information through a Web-based user interface that can be configured to suit the needs of individual end users.

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Outsourcing Debate Driven by Cost, Agility

IT managers find offshore outsourcing to be a compelling way to cut costs

BY THOMAS HOFFMAN
SCOTTSDALE, ARIZ.

COST PRESSURES and the need for increased business agility are leading a growing number of companies to shift more of their IT work offshore, according to panelists who discussed sourcing issues at the *Computerworld* Premier 100 conference here last week.

PREMIER 100 IT LEADERS 2003

On average, 60% of IT spending now goes to external companies for hardware, software and services, while 40% goes to staff, said Bart Perkins, the panel moderator and managing partner at Leverage Partners Inc., a Louisville, Ky.-based CIO consulting firm. The percentage of external spending will continue to grow as more companies turn to offshore outsourcing, said Perkins, who is also a *Computerworld* columnist.

That's the trend at Agilent Technologies Inc., a spin-off of Hewlett-Packard Co., which outsources about 35% of its IT work. Two years from now, it expects to outsource about 60% of its IT functions, particularly in areas such as application development and maintenance. The reason: Seven consecutive quarterly losses are driving the Palo Alto, Calif.-based company to reduce costs and become ever more agile in the market, said Marty Chuck, CIO at the scientific instrument maker.

The cost of labor in places such as India is "too compelling," said Chuck, referring to a figure cited by Merrill Lynch & Co. Chief Technology Officer John McKinley in an earlier conference session. McKinley estimated the savings from offshore outsourcing of IT at 40% to 50%.

Currently, 90% of Agilent's IT workforce is based in the U.S. and Europe. By 2005, Chuck sees that ratio flipping, with just 30% of the IT workforce remaining in the U.S. and Europe.

Agilent isn't alone. A few years ago, Northbrook, Ill.-based Allstate Insurance Co. created a wholly owned IT subsidiary in Northern Ireland to help cut IT costs and allow faster response to competitive pressures. Even with 900 highly skilled IT employees there, CTO Cathy Brune finds herself struggling with whether to shift operations elsewhere.

"Anytime you go outside your four walls, there's risk associated with it," said Brune. "But if you have a very smart team, you can figure things out and learn from others."

"We'll be doing more outsourcing in the next two years," said George Lin, vice president and CIO at Documentum Inc., a Pleasanton, Calif.-based enterprise content management software vendor. Both near-shore and offshore vendors "are becoming more savvy about understanding my unique business," said Lin. That's one reason he expects his company to move a growing portion of its software quality assurance and maintenance offshore.

BART PERKINS says, on average, 60% of IT spending is external.

While offshore outsourcing might be attractive from a cost standpoint, there are wrenching cultural and political issues that IT managers have to iron out with domestic IT employees. "You have to be honest with people and [tell them] what you're planning on doing," said Brune. It's also important to help them improve their technical skill and business acumen to keep them valuable to the organization.

Retaining technical knowledge of certain technologies that are sent offshore is a must as well, said Chuck. "If you don't retain some of that knowledge in-house, it's almost cost-prohibitive to bring it back in," he said.

For its part, Agilent plans to keep people with business process and project management expertise. In addition, it has opted not to outsource its data center operations, since a recent benchmarking exercise revealed that Agilent can run its back-office operations more cost-effectively than service providers can.

Microsoft Security Czar Critiques Efforts

'Traffic cop' says company making strides toward goal

BY MARK HALL
SCOTTSDALE, ARIZ.

Listeners praised Microsoft Corp.'s recent efforts to improve product security and patch management after hearing Scott Charney, the company's chief security strategist, describe them in detail. But they agreed that Microsoft hasn't yet shown it can reach its own security goals.

Speaking here at the *Computerworld* Premier 100 conference last week, Charney explained how, as part of its Trustworthy Computing initiative, Microsoft delayed the release of products such as Windows 2003 and Visual Studio .Net. That delay, he said, gives developers who have been trained in areas such as threat modeling and penetration testing a chance to review the software code for flaws.

The company also added two layers of security verification outside of the product groups, because making developers in the product groups responsible for security "was like having the fox guarding the henhouse," Charney said.

And despite complaints from some corporate users, Microsoft products will now be shipped with maximum security features turned on, Charney said.

Those moves are essential, according to Phil Dunkelberger, CEO of PGP Corp., a software security provider in Palo Alto, Calif. "Now they have a guy who is a traffic cop who does not have money at stake," he said of Charney.

Dunkelberger went on to praise the idea of shipping products with security features enabled by default. "Locking down products when they're released is good, even when faced with resistance from larger users," he said.

But he expressed disappointment that Charney didn't discuss the idea of opening up the security elements of Microsoft's products to open-source evaluation. PGP's source code is released for open-source review before it's sold commercially.

PHOTOGRAPHY BY ASA MATHAT
SCOTT CHARNEY criticized Microsoft's patch management procedures.

RA Vernon, chief security officer at Reuters America Inc. in New York, said that before Microsoft can achieve the goals of its Trustworthy Computing initiative, "major cultural change has to take place" within Microsoft.

Charney acknowledged that that was true, specifically in relation to the vendor's patch management procedures, which he characterized as "not good today at all."

He said Microsoft's decentralized management approach, while "wonderful" in many respects, is an impediment to effective patch management. For example, the company had eight patch installers, and some tools can't determine whether a patch has been installed properly or not.

That, he said, will change with the release of Longhorn, the code name for the next release of the Windows operating system. With that release, which isn't expected before mid-2004 at the earliest, a single patch installer will exist.

CIOs Discuss Strategies for Demonstrating Value of IT

IT chief warns against overselling projects to execs

BY THOMAS HOFFMAN
SCOTTSDALE, ARIZ.

CIOs often have trouble communicating to senior management the value IT investments can deliver to their organizations. After an upgrade to his company's global network infrastructure last year, Baxter International Inc. CIO John Moon decided to take matters into his own hands.

After the networking project was done, Moon handed each of the business leaders at a postproduction senior management meeting a yellow cable. He then told them, "No matter where you are in the world [at any of Baxter's 300 offices], plug this into the wall, and you'll be connected" to the company's global network.

PANEL MEMBERS said CIOs should stay humble despite project success.

The tactic — as well as the message — "was really eye-opening for them," noted Moon, whose Deerfield, Ill.-based health care company has a $350 million IT budget for 2003.

Moon was on a panel of IT leaders who discussed IT investment and value strategies at the *Computerworld* Premier 100 conference here last week.

At Avon Products Inc., Senior Vice President and CIO Harriet Edelman has squeezed business value out of optimizing systems and business processes in critical areas such as procurement and merchandising. Those moves have yielded $10 million in annualized benefits for the New York-based beauty products giant, she said, thanks in large part to her group's use of IT portfolio management techniques.

Still, Edelman was quick to acknowledge that it's important for CIOs and other IT leaders to avoid being arrogant or evasive when it comes to communicating the value of IT to senior management.

"It's an area that's rife with some danger," she said.

Even when IT initiatives deliver huge returns, Edelman said, the trick is to "stay humble and stay within their [business] point of view."

CIOs also sometimes make the mistake of overselling IT projects to top brass, Moon said. That's one reason why Baxter has a staff member whose role is to communicate the value that IT can deliver, he said.

Another way CIOs can get senior management to invest more in IT is by collaborating more closely with business-unit leaders on specific projects.

By persuading her business peers to take the lead on more IT/business initiatives, Edelman said she has helped increase Avon's spending on strategic and transformational IT efforts by 30% during the past two years. ▶

Identify, Kill Nonessential Projects, CIO Recommends

Narrow focus to a few issues, he says

BY JULIA KING
SCOTTSDALE, ARIZ.

If he were writing a song about his first 18 months in the top IT post at BMC Software Inc., CIO Jay Gardner might call it "I Learned It the Hard Way."

Gardner, who spoke last week at the *Computerworld* Premier 100 conference here, held sales and operations positions at Houston-based BMC before becoming CIO. In that post, Gardner said he had to learn from his mistakes.

The first of those, he said, was trying to solve too many problems at the same time. Having reviewed a 2002 Gartner Inc. study of key issues on CIOs' minds, Gardner took a crack at more than a dozen — too many, as it turned out. He soon switched gears and took direct aim at the top three issues: aligning IT and the business, providing guidance and leadership about technology to top executives, and proving IT's value.

JAY GARDNER chose three top issues to address at BMC.

"These are absolutely the top three things to worry about," Gardner told a packed breakout session titled "IT Governance and Organizational Effectiveness."

"It's not so much about the IT organization, but about how I personally spend my time," he said. How and where CIOs spend their time will reflect directly on their success in meeting their top three challenges, he added.

Topping the issues on which Gardner said he spends the most time are IT governance, people and resources management, and IT architecture. Rounding out the list are business alignment and services management.

"When all five of these are working together, you can drive good alignment and IT value," he said.

Among the key challenges Gardner faced when he came into the CIO's job was prioritizing the various IT projects under way at the software maker. A companywide survey showed that 128 different projects were already in progress, many of which had no business owner and no return on investment attached to them.

His advice to other CIOs: "Find stuff not to do. Cross off projects from the list."

One of Gardner's key achievements so far has been repositioning IT workers to work on projects for which they have the necessary skills.

"Fifteen months ago, we took a skills inventory and found that we had a lot of talent that was not being used by people in their current jobs," he said. BMC redeployed workers accordingly, boosting morale in the process. ▶

JUST THE BEGINNING

For extensive coverage of additional panel discussions and presentations at the Premier 100 event, visit our Web site:
QuickLink a1660
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IN THEIR WORDS

"I think the single biggest threat to my environment, and probably to my job as well, is the dual threat of data security and data privacy."

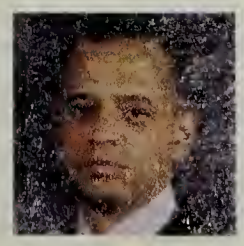
DOUG LEWIS, EXECUTIVE VICE PRESIDENT AND CIO, SIX CONTINENTS HOTELS INC.

"I can be in Redmond in two hours. I know where I'm going and know who to yell at."

DAMIEN BEAN, VICE PRESIDENT OF CORPORATE SYSTEMS, HILTON HOTELS CORP., ON WHY HE FAVORS MICROSOFT OVER LINUX

"Windows has gotten so robust as to cut out low-end Unix. And not-so-low-end."

ROGER J. JONES, CIO, FORTIS HEALTH



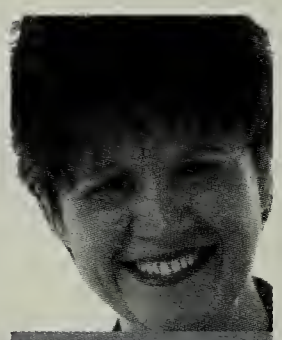
"I fired my top 15 managers."

BILL FARROW, EXECUTIVE VICE PRESIDENT AT THE CHICAGO BOARD OF TRADE, ON HOW HE CONVINCED BUSINESS EXECS THAT HE WAS SERIOUS ABOUT TURNING AROUND IT

MARYFRAN JOHNSON

Keeping the Faith

WHEN WILL THE accelerating pace of change finally overwhelm us? That one question — and the astonishing answer — will resonate with me long after the end of *Computerworld*'s Premier 100 IT Leaders Conference, which drew more than 500 CIOs, CTOs and senior IT managers to Arizona last week [QuickLink a1660].



MARYFRAN JOHNSON is editor in chief of *Computerworld*. You can contact her at maryfran_johnson@computerworld.com.

When Andre Mendes, chief technology integration officer at PBS, posed that question, 77% of the audience replied, "Never."

Now that's faith in IT. And in people. I take that as a most welcome sign in these trying times.

It's also one of the distinguishing characteristics of true leaders — something called "adaptive capacity," as Warren G. Bennis, one of our keynote speakers, so aptly put it. The best-selling author of *On Becoming a Leader* and distinguished management professor at the University of Southern California earned a prolonged standing ovation from our assembled IT leaders after his talk about what makes a true leader [QuickLink 36647].

I can't do justice to his speech in a few sentences, but Bennis said the six core competencies that people want in their leaders are direction, trust, acknowledgment, hope, opportunity for personal growth and results. "A sense of 'We can do it!' " is something leaders communicate to everyone around them, he said.

Indeed, faith in IT is the tie that binds us in this industry. And I saw constant signs of hope and determination at our gathering of IT leaders. In one of our audience polls about IT cost-cutting, for example, 43% said they were focusing more on new projects that will grow the business than on ways to cut further.

In my closing remarks at the conference, I borrowed some observations from a September 2002 column by *Computerworld*'s Frank Hayes, titled "The Faith of IT" [QuickLink 32660]. The heart of his column is about what IT people really believe in, and Frank's thoughts are well worth paraphrasing:

You believe in progress, technology, information and business.

You believe that new ideas and fresh approaches can be better than old ways and that technology can be used to make individuals more powerful and organizations more effective.

You believe that we can use technology to store and process information, but also to discover new information we didn't know, to see patterns we didn't recognize before.

You believe in communication and how it can bring people together to cooperate or compete.

You believe that IT can bridge differences, level inequalities and offer opportunities.

You believe in the new, the unfamiliar, the different. (Even, on occasion, the overhyped and the unproven.)

But most of all, you believe in progress and change, that things can and will get better. That over time, our companies, our industries, even our societies, can be transformed by IT. So if you believe we can solve our problems, then you believe in the future.

You believe that we can and will change the world.

Frank's words remind me of one of the greatest teachers I've ever known, who urged his students to "Go out and move the world an inch." That takes more than hard work, more than technology or business expertise, even more than an adventurous, determined spirit.

It takes faith that what you're doing makes a difference. Everything I saw and heard last week among hundreds of your colleagues tells me that you are out there, moving the world an inch at a time.

Keep the faith. ◗

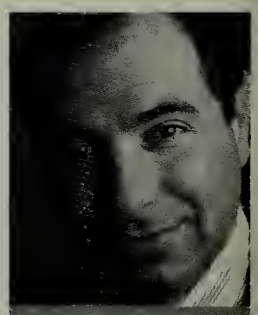
PIMM FOX

Fight Threats From Within

YOU CAN'T PREDICT a security disaster, but you can prepare for one. The recent revelation that an intruder stole more than 8 million Visa, MasterCard, American Express and Discover credit card account numbers should fan the flames about the limits of IT security.

That's because even the best IT security works only up to a certain level. Once past that level, your defenses *will* be breached, either by a technical gaffe or a human miscreant. When that happens, you must be able to put into action a preparedness plan.

The plan should include the active participation of your corporate communications, legal and customer relations departments as well as your executive committee. In the wake of a breach, these people will all be turning to you, the IT folks, to tell them what went wrong and what you're doing to fix the problem. They'll also be asking you for damage assessments and reports on third-party contacts (because so much security work has been farmed out, to white-hat hackers, for example). For these and other reasons, you must have an internal and external communications plan ready for security failures.



PIMM FOX is a freelance writer in San Francisco. Contact him at pimmfox@pacbell.net.

Before you ever have a security breach, assemble the core group of specialists who are trained and prepared to deal with IT security as part of their job. Determine who among them are best suited to communicate internally with users, externally to customers and suppliers and, possibly, even to the media. Then train them. And have backup ready in case your spokesmen are away when a crisis is upon you.

Prepare procedures to alert these key contacts on what information will be available, how to get it and who will be responsible for it. Make sure there's a process for vetting information.

Match the information with the audience. In the recent breach, the credit

card companies didn't publicly reveal the name of the payment processor whose security was compromised, but surely the necessary people inside the credit card companies were briefed in detail. Remember that responding to a security breakdown is an information problem as well as a technical problem. Who you tell and what you tell them is as important as who does the telling.

In addition, security failures can quickly raise legal liability issues, as many financial service companies and health care providers have come to recognize. So it's of paramount importance for your company to speak with a chorus of coordinated voices.

A good, well-tested plan will protect your company against charges of ignoring a threat and make it easier to withstand a crisis when it occurs.

MICHAEL GARTENBERG

Blogging For Fun and Profit

IF I WERE REMAKING *The Graduate* today, with Dustin Hoffman's character as an IT professional who was looking to advance his career, the one word of advice I would give him would be: *weblogs*.

Weblogs, those personal journals and information sites that are growing by leaps and bounds on the Internet, are a simple way for an IT department to create some positive momentum for itself quickly and cheaply. Weblogs, or blogs as they're usually called, allow for easy, direct and effective communication to a wide audience. Most important, the cost of starting an internal blog project is ridiculously low. Most blogging software can be acquired on a trial basis, so you can test to your heart's content, and purchase costs are moderate as well. Here's how to get started creating a corporate blog site.

First, think "modest" and "discreet." While I'd love to see the CEO of every company keep a public weblog (imagine reading what's going on in the mind of Steve Ballmer, Scott McNealy or Carly Fiorina), that's not likely to happen in the near future. In fact, I'd caution you about creating a blog site that can be viewed by the outside world (or even keeping a personal weblog that refers to your company's activities) without first going through a very thorough review process internally. There are already tales of a number of good people who have lost jobs because of corporate discussions on their weblogs.

Instead of going for the full corporate monty from the start, first launch an internal IT blog. Start slowly, as you would with any IT project. Create a beta blog that can be viewed only by IT managers, then open it to IT staffers before you roll it out to the entire company. Get a group of folks to volunteer to create your first series of weblogs and use the beta process to weed out the ones who don't post often enough.

MICHAEL GARTENBERG is research director for the Client Access and Technologies group at Jupiter Research in New York. Contact him at michael_gartenberg@mindspring.com.

Nothing is worse than a stale blog.

Use your blog as a vehicle for communication. Explain what's going on inside IT operations, link to interesting articles and create forums for internal discussions. While everyone is comfortable using PCs and most software, they still appreciate getting timely advice and opinions from experts in the field. Why shouldn't they get it from you and your team?

During the beta process, post at least three times a week, keeping your comments pithy and focused on a single point. Don't make it available to the entire firm until you have at least one month's worth of content.

Once your blog is established and you begin to find your voice, you might want to advocate an external site. Explore how blog-based external communications can create more business initiatives. Lead by example, and champion the cause. Along the way, there's a good chance for you to succeed and become a hero. That's about as good as it gets for IT these days.

Communication via blogging is a powerful tool that truly leverages the power of the Web. In fact, I liked this idea so much, I did exactly what I outlined above and helped launch Jupiter Research's first weblogs at *http://weblogs.jupiterresearch.com*. Check them out and send me some feedback, but more important, go download some software, find your voice and start blogging your way to glory.

WANT OUR OPINION?

More columnists and links to archives of previous columns are on our Web site:
www.computerworld.com/columns

READERS' LETTERS

Commit to ROI, IT

I KNOW THAT MARK HALL was trying to stimulate thought by taking a contrarian position in his column "Forget ROI" [QuickLink 35575] – at least I hope that's what he was doing – but he is way off base. I agree that pure ROI has some shortcomings in evaluating and prioritizing IT projects and can cause opportunities to be lost. The problem is that pure ROI doesn't have a way to quantify a lot of the benefits that "your instincts, knowledge and experience" tell you will come from a particular IT initiative. And trying to quantify the benefits, costs and risks associated with an IT commitment is the only way to bring a level of discipline to what has been a hit-or-miss proposition based on gut feelings.

Many ROI-based efforts come up short because people aren't willing to put a value on the benefits that will be achieved by making the IT commitment. I was around in the 1970s when people were installing Wang word processors, and they were basing their decisions on improved productivity and quality. Same thing with PCs in the 1980s. Why are so many companies moving to Linux servers? Better price/performance and reliability. All of these decisions were based on committing IT resources to produce real business value. The problem isn't with ROI – it is that people are afraid to put down on paper what the IT effort should produce in the way of business value. Once companies understand how to show the *real* business value that can be created with their IT efforts, I believe ROI-type factors will actually encourage enterprises to make more commitments to IT.

Bruce Skaistis
President, eGlobal CIO, Tulsa, Okla.

MARK HALL'S COLUMN is a perfect example of IT staff arrogance and just one of the reasons real business people have a low opinion of IT people. The average IT staffer has no idea what makes sense to the business organization. Hall proves this with his comment about ROI and Wang word processors. A significant ROI was very easy to prove on Wang installations. It has always been the stance of IT staff that they don't need to justify their favorite projects. That's why the graveyard of failed projects is so large.

Andrew H. Olson
Managing director, TEAM International Group, Gainesville, Fla.

Always Encrypt

WHY WASN'T THE DATA that was compromised at Data Processors International stored in an encrypted format ["System Break-in Nets Hackers 8 Million Credit Card Numbers," QuickLink 36530]? In writing databases to store personal information for my company, it never occurred to me to store the data in an unencrypted format (public key/private key). I set up an XML format, then encrypt it, then store it. If it's transmitted to a database server from a Web server, it's encrypted before it goes to the database server. It's never decrypted until it's time to view it.

Curtis Maurand
Network engineer, Prexar LLC, Portsmouth, N.H.

Offshore Security

AS I READ ABOUT the intent of many companies to engage in offshore outsourcing ["Companies Expected to Boost Offshore Outsourcing," QuickLink 36377], I have to ask why there isn't more solid information being reported on the data security issues that could arise. It seems to me that offshore data centers might have the potential for educating the wrong people.

Ben McCullom
Chestnut Ridge, N.Y.

Firewalls and SIP

ALTHOUGH THE FEB. 3 QuickStudy, "Session Initiation Protocol" [QuickLink 35318], suggested otherwise, interoperability between equipment is quickly and fairly easily corrected within the SIP community, so that's not causing much deployment delay. As for concerns that SIP will make networks more vulnerable, the source may be the firewall and NAT (Network Address Translator) issue. SIP communication doesn't traverse most installed firewalls and NATs.

Several methods and equipment have been suggested to solve this problem, but the most general one is to eliminate the problem where it occurs, in the firewall itself. Firewalls that include a SIP server that dynamically controls the firewall have been available for over a year, and since they're no more expensive than ordinary firewalls, they should be considered for all new installations.

Karl Erik Stahl
President, Intertex Data AB, Stockholm, karl.stahl@intertex.se

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 500 Old Connecticut Path, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

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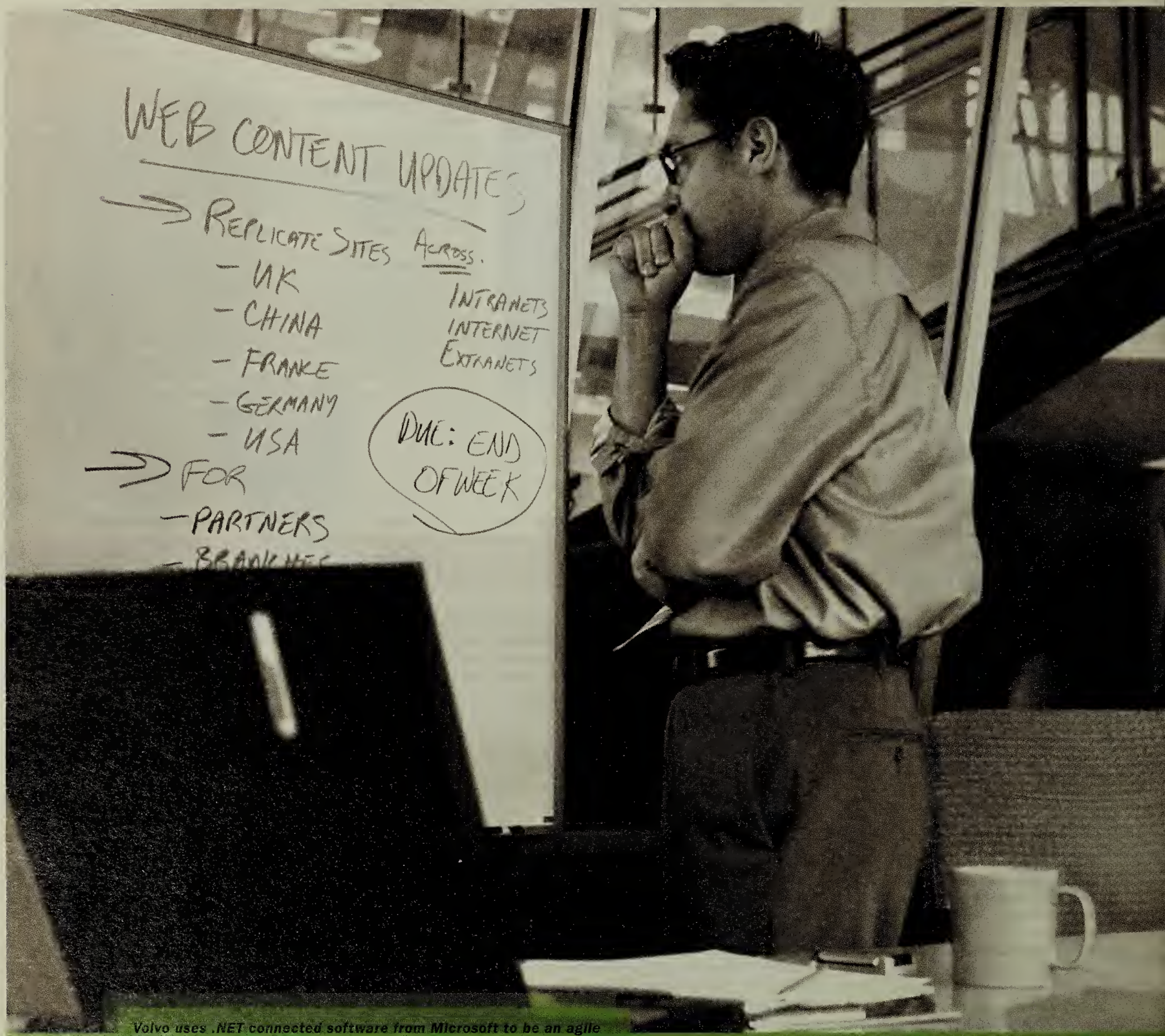

Volvo uses .NET connected software from Microsoft to be an agile business. *A premium global brand, Volvo Cars operated sites in dozens of countries. With each country managing its own site locally, their Web sites were inconsistent and changes were difficult to implement. With plans to localize volvocars.com for more than 40 markets, they turned to Microsoft Content Management Server, which let them centralize management of all their sites to ensure uniform branding. Yet it allowed content owners worldwide to quickly update their own sites with local information in their own language. And IT stays contentedly on top of it all.*

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QUICKLY CONNECT CONTENT

AND CONTENTMENT.

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Your applications are backed up, but if they can't be used to run your business, they might as well be here.
PRIMARY
SECONDARY

Introducing Information Availability. It's business continuity and more.

It's not just about protecting data. It's about keeping people connected to it so your business runs uninterrupted, 24x7.

Typical business continuity solutions go to great depths to back up applications, networks and business-critical information. But what they don't do is protect your organization's access to it all. That's where a SunGard Information Availability strategy comes in.

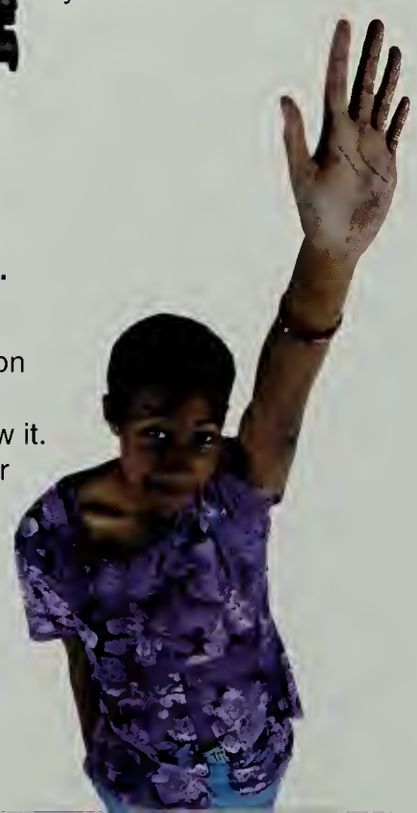
Information Availability goes beyond business continuity by combining technology, redundant infrastructure and technical expertise to keep your people and information connected, no matter what. When you understand the many ways disconnects can happen, you'll see why Information Availability is the best way to prevent them. Business continuity plans may incorporate one or more of the following features, but only a SunGard Information Availability strategy offers all of these *from one source.*

It's a place to go when workers can't go to work.

Business continuity plans rarely plan on an emergency closing your office or building. A SunGard Information Availability strategy does. We can place your people immediately at our over 15,000 end-user positions in up to 55 cities – all convenient to commercial centers and airports. And if you want to keep your people close, we can even come to you. With 39 fully-equipped mobile facilities, we have the most flexible mobile recovery fleet in the industry, ready to roll to virtually any location.

It's confident customers, always in contact with you.

Disaster could well strike your company. But with an Information Availability plan from SunGard, your customers may never know it. SunGard can help you engineer a solution that meets your information availability requirements.



It's replication of your IT system.

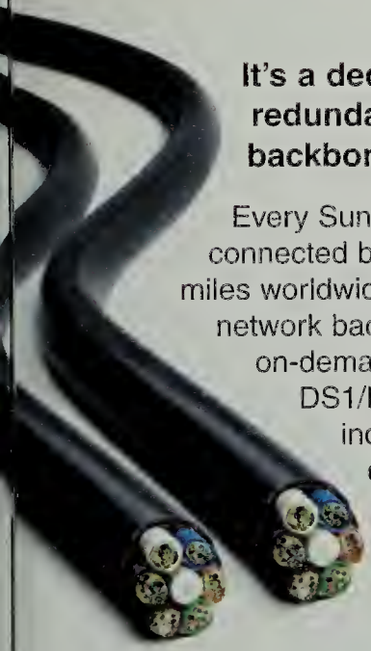
Nobody's IT network of operating systems, servers and software works quite like yours. SunGard's Information Availability program can provide you with an optimally configured, perfectly maintained and scalable system, pre-tested, ready and waiting to continue your critical business processes at a moment's notice.

It's hardened facilities and high-level security.

SunGard maintains more than 3 million sq. ft. worldwide of strategically placed, hardened facilities, providing you with high availability to your information and virtually no downtime. Well-staffed facilities feature fully redundant power and communications, state-of-the-art equipment, multi-platform compatibility and high levels of security.

It's off-site data storage that's truly off site.

Some continuity plans incorporate in-house backup tapes and storage. But they're useless in a power failure, fire or evacuation. SunGard's off-site storage is a key part of Information Availability. Our file sharing, primary storage and data backup services are unrivalled for data integrity and reliability. And they free up your equipment and people for other purposes.



It's a dedicated, redundant network backbone.

Every SunGard location is connected by nearly 25,000 miles worldwide of dedicated network backbone, providing on-demand or dedicated DS1/DS3 protocol-independent communications.

It's platform-independent professionals bringing it all together.

With SunGard, more than 2,000 Information Availability experts are at your fingertips. We can help you with everything from vulnerability assessment and impact analysis to planning, technology integration, network and architecture solutions, deployment, testing and certification. Everything you need to keep your business running, no matter what.

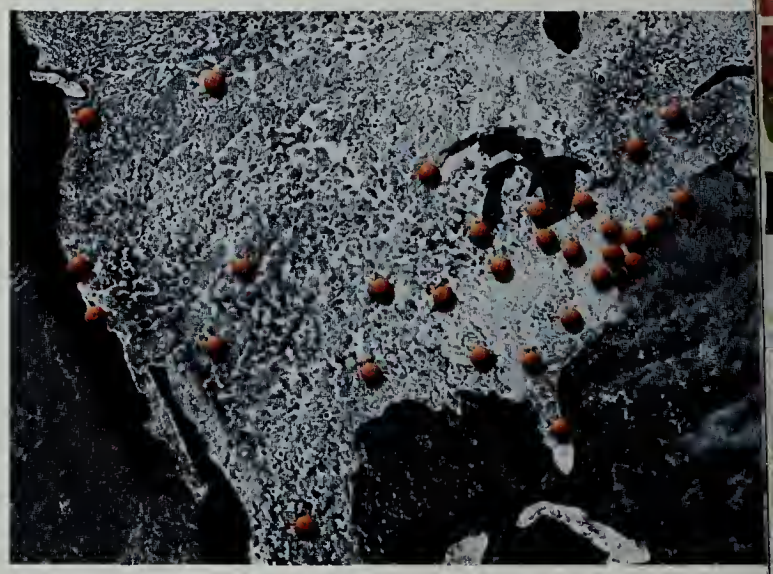
SUNGARD®
Availability Services
The Net Beneath You

Don't let lost access to information take your company down. Stay up and running with an Information Availability strategy.

Talk with us. An Information Availability strategy from SunGard can be a life-saver when it comes to keeping people and information connected. Data is more time-sensitive than ever. And SunGard's complete continuum of services can protect your information's availability, enterprise-wide. From tiered applications recovered as fast as 48 hours, to high availability applications in as little as 2 hours, to managed services that provide continuous access to critical information.

SunGard offers the industry's most comprehensive Information Availability services – from planning, traditional disaster recovery, network and managed services to IT outsourcing, professional consulting and high availability solutions. Plus, end-user recovery facilities where your people can go to reconnect with data in an emergency. In fact, nearly 90% of U.S. companies with $1 million or more in revenue are located within 35 miles of one of our facilities.*

Every day, we help ensure that over 10,000 clients worldwide have uninterrupted access to their business-critical information. They count on us to supply the people, technology and infrastructure necessary to provide multiple points of access to information, flexible alternate workplace options for their employees, and updated continuity plans and systems to meet their future technology needs.



SunGard is one of the largest providers of platform-independent business continuity, managed hosting services and more. No company has more ways to keep your business in business. See how your company rates on Information Availability right now. Take our Information Availability Challenge at **www.availability.sungard.com/iac**

*Source: Dunn & Bradstreet's MDDI

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- the company that founded the recovery industry in 1978
- comprehensive support for more than 30 platforms
- 75 facilities in 10 countries with more than 15,000 end-user positions worldwide

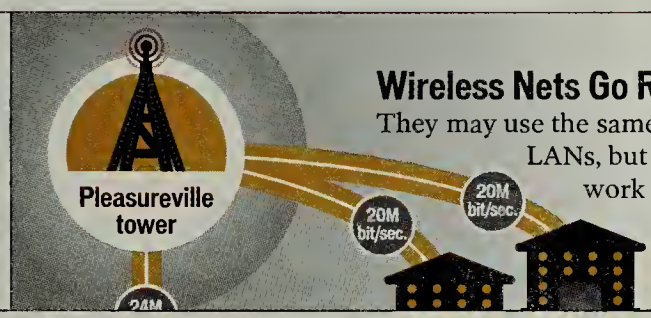
SUNGARD®

Availability Services

The Net Beneath You

OPINION
Don't-Ask-Don't-Tell E-Commerce
The recent theft of 8 million credit card numbers shows why credit card associations should rethink their security policies, says Robert L. Mitchell. **Page 33**

EMERGING TECHNOLOGIES
Virtually Face to Face
IP-based videoconferencing is finally taking hold as corporations upgrade their WAN infrastructures to support IP telephony. **Page 30**



Wireless Nets Go Regional
They may use the same spectrum as wireless LANs, but wide-area wireless network technologies can bridge Ethernet LANs in offices many miles apart. **Page 28**

CAMPBELL LAIRD

Trades AT TOP SPEED

Straight-through processing means that financial services firms must move to all-digital processes to remain competitive and connected.

By Lucas Mearian

IN THE NAME OF STRAIGHT-THROUGH PROCESSING (STP) of securities trades, financial services companies over the next two years will spend an estimated $6 billion replacing their manual processes by plugging into virtual trade-matching utilities (VMU), installing middleware and integrating front- and back-end computer systems.

In simple terms, STP is the removal of manual processes in the trade-processing cycle, including paper and disparate data systems, creating an unbroken electronic stream of information from the broker/dealer to the clearinghouse. At present, much of the trades process still relies on fax or telephone.

STP includes messaging standards, translation middleware and electronic connectivity among investment managers, broker/dealers, custodian banks and clearing companies. One confusing aspect of STP is its association with T+1, or trade plus one day. T+1 refers to reducing the trade settlement cycle from the current standard of three days to one, and it's dependent on STP's electronic efficiencies.

The Securities Industry Association (SIA), an industry group with offices in New York and Washington, has lead the charge toward STP and T+1. But the Sept. 11 terrorist attacks and the economic downturn squelched the SIA's effort to move to T+1 by 2005, as attention and budgets turned toward more critical needs such as disaster recovery, business continuity and regulatory compliance. The SIA stated in July that it will focus on promoting STP by 2004, with no deadline for T+1.

The real incentive to move to STP, the SIA argues, is the return on investment, which could be considerable for many companies.

For example, the Northern Trust Corp. in Chicago went live in August with an e-mail alert system that replaced a labor-intensive fax process for notifying investment managers of corporate actions such as mergers, acquisitions and name changes. The homegrown technology, called Corporate Action Delivery and Response system, took a year to develop and cost just under $10 million. It has reduced the number of employees required for data input by up to 70% and improved productivity by 50% to 60%, says Teresa Parker, who is responsible for securities and banking operations worldwide at Northern Trust.

The Web-based e-mail system runs off a Sun Solaris server, while production data, including accounting programs, runs off IBM iSeries and zSeries mainframes. The Web-based e-mail application is a proprietary program based on Java. It's used for sending securities-related data to fund managers, who are online using either the Society for World-

Continued on page 24

I AM A POLICE OFFICER.

I HAVE X-RAY VISION. I HAVE THE POWER TO SEE A BANK ROBBERY FROM ACROSS TOWN. I HAVE THE POWER TO SEE HOW MANY PEOPLE ARE ROBBING THE BANK. I EVEN HAVE THE POWER TO SEE WHICH ONE IS WEARING THE SKI MASK. I AM MORE THAN A POLICE OFFICER.

I AM A NETWORK.

I AM THE X-RAY GLASSES. I AM A WIRELESS NETWORK. I HAVE THE POWER TO SEND VIDEO AND DATA WITHOUT THE USE OF WIRES. I HAVE THE POWER TO LINK A BANK'S SURVEILLANCE CAMERA TO A SQUAD CAR EN ROUTE TO A ROBBERY. I HAVE THE POWER TO SHOW COPS WHAT THEY'RE UP AGAINST. I AM HERE TO PROTECT AND SERVE. I AM MORE THAN A NETWORK.

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STP Pays Off for Fleet

FleetBoston Financial Corp. launched one of the industry's first Internet links for high-value money-market and mutual-fund customers, creating an electronic straight-through process connecting its front- and back-end systems.

FleetBoston partnered with Bonaire Software Solutions LLC to develop the application, which lets investors order trades online and lets traders and salespeople view, approve or reject customer orders through an electronic link to a trade blotter. It then sends approved trades directly to multiple record-keeping and/or processing systems. Both FleetBoston and Bonaire are based in Boston.

FleetBoston replaced a manual process, which required customers to call in to find out what their position was on any given day and what excess cash they had in their accounts.

Since the Web-based portal was launched in February 2002, the number of money-market and mutual-fund accounts has tripled. Large volumes of trades that normally took an hour to process now take less than five minutes, says Dean Richmond, a senior systems manager at FleetBoston. Thirty-one percent of FleetBoston's mutual fund and money market customers, or 470 users, access their accounts at least once per day via the system.

Richmond said the system took about a year and a half to build but didn't require replacing any existing systems. "It involved taking existing legacy systems and giving them the ability to talk to a Web application. We had to build a lot of APIs [application programming interfaces] and make sure that process was hardened and redundant," says Richmond. The system almost immediately paid for itself through time savings and customer retention, he adds.

Continued from page 21

wide Interbank Financial Telecommunications (SWIFT) industry messaging standard or Northern's Web-based product.

"Before, it took 10 people to process 1,000 trades a day, and now it takes four people," says Parker. But there is risk involved in moving to an all-electronic process. "If you get a trade wrong, the most you're going to pay for is the lost interest on the trade. If you get a corporate action wrong, you might have to sell a security you got by mistake. That could be 17 cents, or it could be millions of dollars," she says.

IT managers say that the benefits of STP outweigh the risks. A move to an all-electronic flow of information allows managers and broker/dealers to see a stock price first and react to it, which can translate into increased profitability and improved customer service, according to Larry Tabb, an analyst at TowerGroup in Needham, Mass. Electronic systems also require fewer salespeople, who are normally busy writing down orders and having staff keypunch information into back-end systems. STP also helps remove errors from orders that in a manual process can be entered at any point as orders move internally and externally from a fund manager or retail broker to a custodian bank and a clearinghouse.

Integrating Internal Systems

Because banks work with multiple brokerages to authorize the release of funds that are used to cover securities trades, the manual approval processes used today can take several days to clear even one trade.

"Firms use multiple systems, and not all of them are linked together. The issues have to do with linking all the systems together so transactions flow from one to another with no one handling it. There are snafus everywhere along the line," says Tabb.

Internal message standards for cash reporting, bulk payments, investment funds, securities pretrade processes and customer-to-bank credit transfers are virtually nonexistent, say analysts.

Applications and messaging systems within securities firms and banks weren't created with consistent architectures, so middleware is needed to send data from one message format, such as the Financial Information Exchange (FIX) protocol, to back-end systems that may use proprietary formats.

STRAIGHT TALK

For additional information on the need for messaging standards, visit:

QuickLink 36685
www.computerworld.com

Generally, high-value customers — those who trade more than $100,000 a day — call brokers or sales representatives on a trading desk to check their account balances, stock holdings and what excess cash they might have to invest. Sales representatives then write up order tickets by hand and fax them to an operations department, where someone else keys in the order into back-office systems. Those orders then have to be reconciled between the front and back office to make sure all the tickets were received without any missed trades.

Virtual Matching Utilities

One key issue for all companies participating in securities trading is connectivity to nascent VMUs, such as Boston-based Omgeo LLC and the Zurich-based Global Straight-Through Processing Association. Matching in posttrade message instructions at one centralized data center creates an unbroken flow of electronic data between financial services firms.

Matching utilities are basically trading traffic managers. They use large servers or mainframes and common messaging formats based on XML to allow broker/dealers and investment managers to communicate with one another and assemble the many pieces of data required for a trade to be confirmed before being sent on for settlement by a custodian bank.

Royal London Asset Management has been integrating back-office systems for about a year and plugged into Omgeo's Central Trade Manager (CTM) VMU about three months ago. Before that, the London-based bank was taking an average of 20 hours to get confirmation of a trade, according to Julian Baines, Royal London's investment servicing manager, who oversaw the deployment of Omgeo's technology at his company. The same process now takes three hours, he says.

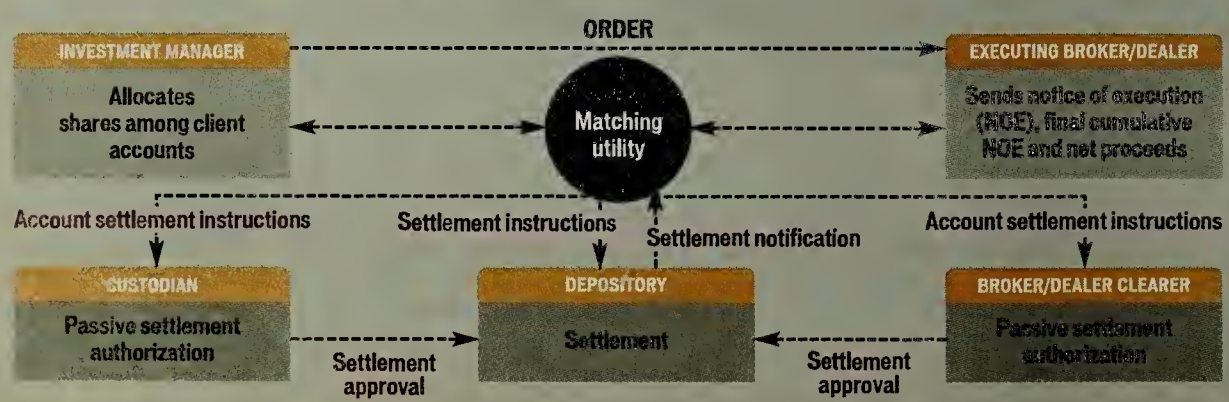
Also, prior to using Omgeo, Royal London's fund managers input data onto databases that were transferred daily in batch mode to a back-office system, where the trades were physically examined by clerks on the company's settlement team. Those clerks in turn printed an electronic confirmation and used that to discover exceptions or mistakes.

"Fifty percent of those orders were failing on poor allocation data, poor information to brokers or vice versa," says Baines, who adds that errors were virtually eliminated with the new electronic messaging system. Royal London uses an application programming interface gateway device on an existing Windows NT server that translates code from its Thomson Financial's Icon investment management, valuation and accounting system into Omgeo's CTM.

"Because our back-end database was from Thomson, they did the integration work," Baines says. The connection into Omgeo's CTM took about a year. The greatest hurdle, as Baines puts it, was understanding "the new jargon." Royal London has linked eight of its highest-volume brokerages, with four more in the pipeline. "That would give us 60% of our volume," Baines says. "Once we hit that, we'll be looking to increase it and have all 60 brokerages on by the end of the year."

An STP Model for Facilitating Securities Trades

This example shows how an STP system facilitates real-time matching of data throughout the trade life cycle. The process starts with the initial trade agreement between the broker and investment manager; the subsequent settlement agreement involving the executing broker, clearing brokers and custodian banks; and the actual settlement with the depository. The matching utility sends pending settlement instructions to the depository, so each agent doesn't need to do so in a separate transaction.



SOURCES: SECURITIES INDUSTRY ASSOCIATION, GLOBAL STRAIGHT-THROUGH PROCESSING ASSOCIATION

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WIRELESS NETS GO REGIONAL

Wide-area wireless networking systems can provide a cost-effective alternative to leased lines for Internet access or metro-area connectivity. By Bob Brewin

THE UNLICENSED PORTION of the U.S. radio frequency spectrum represents just one-tenth of 1% of the total bandwidth allocated for communications, but this thin slice has made the current boom in wireless LANs possible. Because WLANs use the free spectrum, companies can set them up without the hassle or expense of going through the Federal Communications Commission's licensing process.

But WLANs aren't the only networking technologies leveraging the free spectrum. Corporations are also using fixed wireless systems and services from wireless service providers to extend connectivity beyond the LAN.

Fixed wireless systems use the same 2.4- and 5-GHz bands used by WLAN products. But highly focused directional antennas support wide-area connections over distances measured in miles, rather than the hundreds of feet WLAN devices cover. Fixed wireless devices let enterprises tie together regional or metro-area office buildings using a privately owned and operated broadband network. The systems can support point-to-point Ethernet bridging or IP-based multipoint packet routing. And some products also offer a separate T1 channel, eliminating the need to lease physical T1 circuits for digital voice traffic.

Companies that don't want to set up their own systems may find similar wireless offerings from service providers. A new breed of wireless Internet service providers (ISP) uses the unlicensed frequency band to offer last-mile broadband services at rates lower than those that telephone companies charge for comparable leased-line services. Service providers offer data rates ranging from a few hundred kilobits per second to 54M bit/sec. or more. And in some remote locations, as well as in parts of some metropolitan areas, wireless ISPs are the only broadband alternative.

Building a Network

York, Pa.-based Kinsley Inc. opted for a fixed wireless WAN that serves 1,500 workers in multiple locations. Patrick Kinsley, a project co-coordinator at the construction and commercial property management firm, says the company had to accommodate large data files generated by computer-aided design (CAD) workstations, as well as growing voice traffic. It also needed a way to connect telephone and computer systems in office trailers at construction sites into back-end systems more quickly than the several weeks it took to provision lines from the local telephone company.

Business Information Group (BIG), the York-based systems integrator that hosts Kinsley's data center, designed the fixed wireless network, which serves 1,500 workers in eight locations. Some 22 other companies housed in buildings Kinsley manages also pay to use the system. This helped shave Kinsley's cost in building the network, says John Dolmetsch, BIG's president and CIO. The wireless network consists of a high-speed backbone, with secondary spurs fanning out to other offices at speeds ranging from 284K to 24M bit/sec.

Kinsley routes all voice traffic from IP and digital phones over its wireless IP backbone. Digital phone signals are converted to IP at remote switches. All voice traffic terminates in IP trunk cards in a private branch exchange from Nortel Networks Ltd. The switch can handle up to 336 concurrent voice-over-IP sessions, Dolmetsch says.

Kinsley's wireless network uses Tsunami point-to-point and point-to-multipoint wireless networking equipment from Proxim Inc. in Sunnyvale, Calif. Tsunami operates in the 5.8-GHz unlicensed frequency band and interconnects backbone locations at speeds up to 24M bit/sec. The network also uses BreezeAccess II 2.4-GHz wireless equipment from Alvarion Inc. in Carlsbad, Calif., to provide connectivity with smaller locations and remote job sites (see diagram).

The equipment is installed on five towers within a 30-mile radius around York, each no farther than 10 or 12 miles from an office location, Dolmetsch says. Kinsley completed the fixed wireless backbone in 2001 and has continued to add office locations.

Dolmetsch estimates the system's five-year return on investment at 70% when calculated against the cost of the voice and data circuits it replaced. Savings on phone charges alone have been $3,500 per month, he says. The wireless equipment cost about $200,000.

Todd Carothers, an analyst at The Telnecity Group LLC in San Jose, says the size and scope of the Kinsley wireless WAN is unusual. "I've never heard of [a wireless WAN] by one company as extensive as this," he says.

The Hotel Wireless

Rather than install a private fixed wireless system, Kevin Lanigan, vice president and general manager of the Stanford Park Hotel in Menlo Park, Calif., contracted with a service provider. The service delivers the high data rates Lanigan needs to support guest Internet access and provides variable bandwidth — something he couldn't easily obtain from his local phone company.

The hotel, located in the heart of Silicon Valley, hosts large meetings for local high-tech companies. Those guests require bandwidth for meetings that it would typically take multiple T1 lines to support. Lanigan initially contacted the local exchange carrier, a unit of SBC Communications Inc. in San Antonio, and was told that it would take 60 to 90 days to install such circuits. In contrast, NextWeb Inc., a wireless ISP in Fremont, Calif., provides a basic 1.44M bit/sec. T1 circuit from a small dish on the hotel's roof, and it can ramp up the bandwidth to the equivalent of multiple T1 lines in one day.

David Williams, vice president of business development at NextWeb, says his 5-GHz service supports speeds from 1M to 10M bit/sec. Lanigan's T1 service

supports WLAN access throughout the 163-room hotel — a service for which it doesn't charge guests extra. Nonetheless, Lanigan says the broadband wireless installation has paid off: The hotel has landed "not fewer than 12 group bookings" in the past year because of its ability to offer such connectivity.

While broadband wireless was once viewed as ideal for rural areas with little telecommunications infrastructure, Trent Anderson, CEO of wireless ISP SkyRiver Communications Inc. in San Diego, says that even in densely populated areas, there are pockets not served by telephone companies' Digital Subscriber Lines or fiber. And if fiber connections are available, they are often prohibitively expensive, he says.

Linda Tucker, co-founder of Aerial Access LLC, a digital aerial photography firm in San Diego, fell on the other side of that digital divide. Aerial Access has a half terabyte of stored aerial photos and often needs to send 10MB or larger image files to prospective customers. SBC could offer only fractional T1, at a cost of $350 per month. SkyRiver charges $149 per month for a 512K bit/sec. connection, which Tucker says is adequate for her requirements. "An average file between 3 and 10MB transmits in between 30 and 60 seconds," she says.

Growing Pains

Although vendors such as Proxim and wireless ISPs such as NextWeb and SkyRiver have established a fixed wireless beachhead, the wireless WAN market is still in its infancy, according to Wai Sing Lee, an analyst at Frost & Sullivan Inc. in San Antonio.

Between 1,500 and 1,800 wireless ISPs operate in the unlicensed spectrum band today, according to Daryl Schoolar, an analyst at In-Stat/MDR in Scottsdale, Ariz. He predicts significant growth over the next several years. Free spectrum and low-cost equipment, at about $8,000 for a complete base station, will serve as the drivers for this growth, he says.

But analysts and wireless ISPs alike say growth could be inhibited by interference. The 2.4-GHz band is already crowded, and the same may happen in the 5-GHz band. NextWeb's Williams says interference could be mitigated by using a technique called dual polarization, whereas Carothers at Telnecity envisions the wireless ISP industry developing a self-policing interference body.

Security is also a concern, but not as much with fixed wireless as with broadband, since fixed wireless uses a narrow, hard-to-intercept transmission beam. The Proxim gear used by Kinsley adds a proprietary encryption scheme. Wireless ISPs like SkyRiver build in additional layers of security as well, including a Media Access Control layer. They also offer individual addresses for customer equipment.

But even though the industry is still evolving, the technology is stable. Craig Mathias, an analyst at Farpoint Group in Ashland, Mass., calls fixed wireless relatively easy to install and operate.

And to users, it seems like magic. Jeff Leaf, a project co-coordinator at Kinsley-owned LSC Design Inc., notes that "when you tell people in York that you're doing business over a wireless network, they don't have a clue." When the network was first turned on, Leaf says, he marveled at the speed at which his CAD files were transmitted. Now he doesn't think about the network or its speed at all — a sure sign that the technology has gained acceptance.

MORE MOBILE

For more on wireless networking, visit the Mobile & Wireless Knowledge Center.

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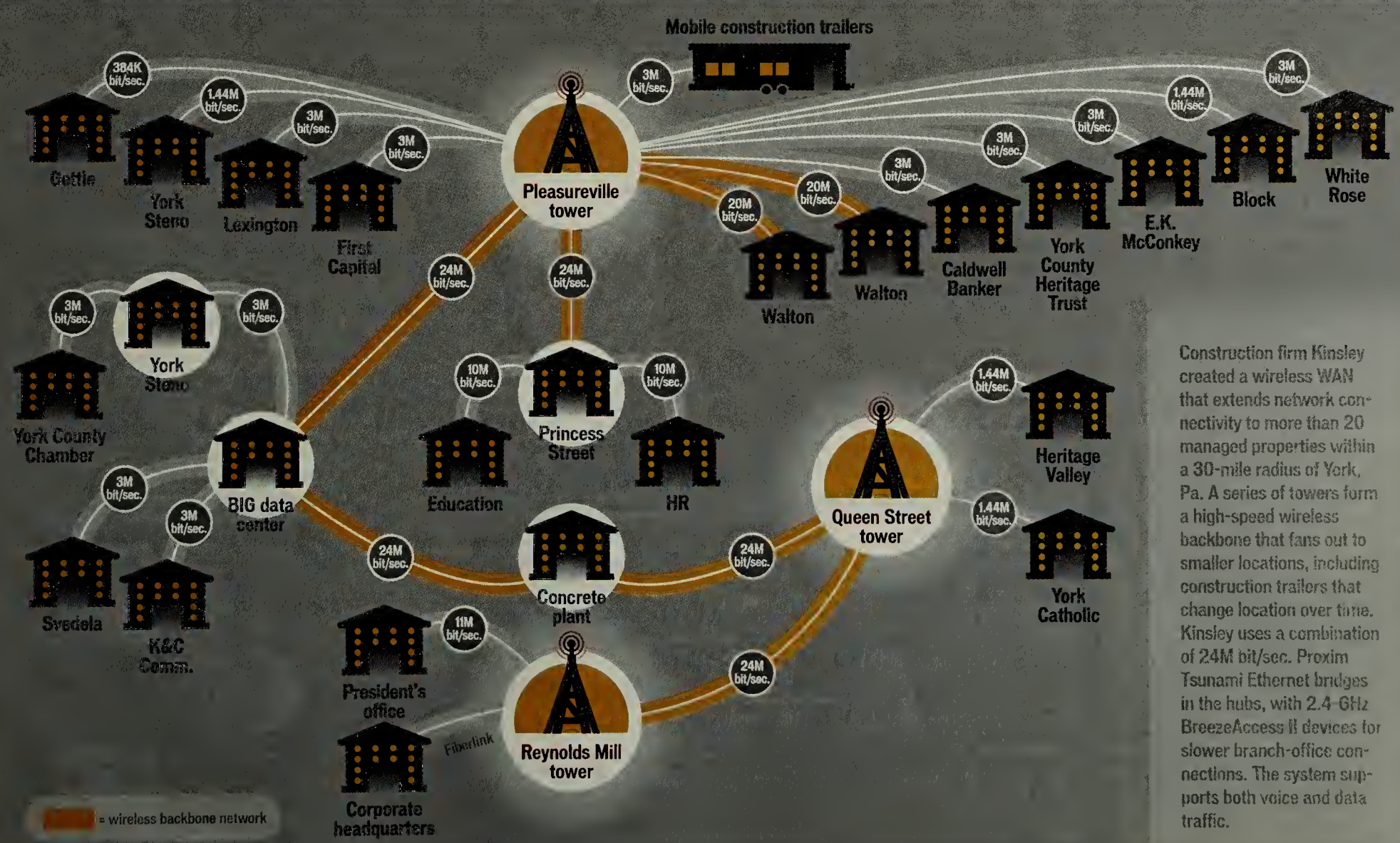
KINSLEY'S WIDE-AREA WIRELESS NETWORK



Construction firm Kinsley created a wireless WAN that extends network connectivity to more than 20 managed properties within a 30-mile radius of York, Pa. A series of towers form a high-speed wireless backbone that fans out to smaller locations, including construction trailers that change location over time. Kinsley uses a combination of 24M bit/sec. Proxim Tsunami Ethernet bridges in the hubs, with 2.4-GHz BreezeAccess II devices for slower branch-office connections. The system supports both voice and data traffic.

SOURCE: BUSINESS INFORMATION GROUP, YORK, PA

Virtually Face to Face

Outlook: As corporations upgrade infrastructures for IP telephony, integrated IP-based videoconferencing systems are starting to proliferate. By Robert L. Mitchell

VIDEOCONFERENCING used to require users to adjourn to specially designed rooms filled with complex technology that worked over satellite, Integrated Services Digital Network (ISDN) or other private network services. Such systems cost upward of $50,000 per site. But no more. Compression technology has improved, design upgrades have cut costs, and a new generation of videoconferencing systems designed to work over IP networks as well as ISDN is gaining a foothold in corporations.

"We have seen a heavy shift toward IP," says Stacy Saxon, director of marketing at videoconferencing vendor Polycom Inc. in Pleasanton, Calif. She says she expects 75% of all videoconferencing systems to be IP-based within the next three years, up from just 25% today. Giga Information Group Inc. in Cambridge, Mass., predicts 18.9% annual growth in videoconferencing appliance sales through 2005.

EMERGING TECHNOLOGIES

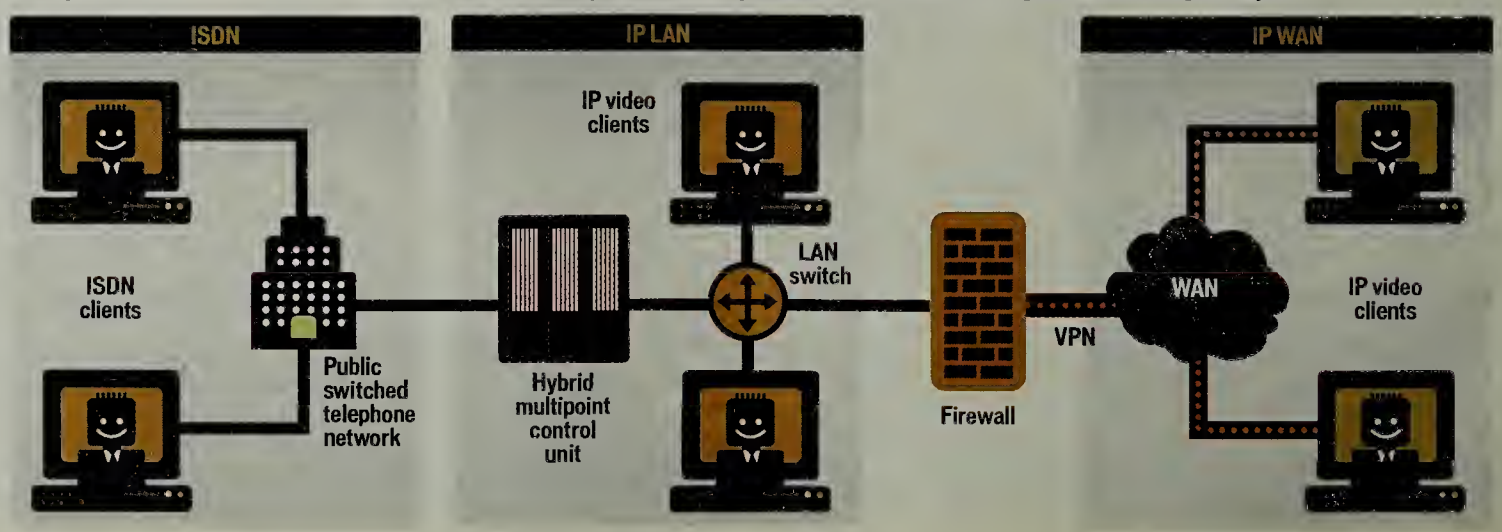
Several developments are driving the technology forward. IP-based systems eliminate the need for ISDN service, which can be expensive and difficult to provision and is unavailable in many locations. Unlike those based on ISDN, IP-based systems can be moved to any office with an Ethernet jack. Corporations are gradually replacing network infrastructures with switches and routers that support quality-of-service standards required for IP telephony and enable clear, jitter-free video services.

"We're piggybacking on what the company's doing with voice over IP," says Chris Duncan, global leader for e-communication technology at The Dow Chemical Co. in Midland, Mich., which is equipping 500 offices worldwide with an IP videoconferencing system. Ethernet advances have also boosted LAN bandwidth to Gigabit Ethernet and 10 Gigabit Ethernet speeds that can better support video feeds. And businesses are also extending those high-bandwidth connections to remote offices. "Getting fairly large bandwidth isn't as big an issue as it was four or five years ago," Duncan says, citing the current glut in long-haul fiber capacity.

Meanwhile, bandwidth requirements

Video Over IP

Videoconferencing systems can be configured to run over private IP networks, eliminating the need to provision ISDN while allowing integration with Web conferencing and other IP-based applications. Over wide-area connections, a VPN is often implemented for increased security. Most systems also support ISDN links for background compatibility. Although a portion of the ISDN link may touch the IP network, the ISDN H.320 client protocol differs substantially from the H.323 connections of IP users and doesn't present security issues on the IP network segment, according to Polycom.



Vendors Jump on IP Video Bandwagon

Videoconferencing products fall into two categories: group/room systems, and single-user desktop systems. The endpoint equipment may consist of a stand-alone appliance, or it may connect to a PC using a Universal Serial Bus port or internal add-in card.

Most corporate deployments are group systems. While appliances are easier to use, PC-based units offer better integration with Web conferencing features such as application sharing, says Giga analyst Elizabeth Herrell. Conferencing with more than one location requires a multipoint control unit, which acts as a central call manager. Vendors also offer specialized software that handles bandwidth management and call scheduling and enables the creation of a global address book.

Prices range from less than $5,000 per site for a system supporting up to three callers to $15,000 or more for room systems with large screens. But users also need to consider the incremental cost of upgrading and managing a more complex network infrastructure to support IP videoconferencing, Herrell notes. All systems can support a mix of ISDN and IP connections.

While at least 10 vendors offer products in this area, three players dominate, Herrell says.

Polycom Inc.
Pleasanton, Calif.
www.polycom.com
Polycom has more than two-thirds of the market and a comprehensive suite of hardware and software offerings. Products include the $599 ViaVideo PC-based single-user system. Pricing for group systems, which include the ViewStation set-top and PC-based iPower series, start at $3,999.

POLYCOM'S IPOWER 9000

Tandberg Inc.
Reston, Va.
www.tandbergusa.com
Tandberg focuses on the high end, offering 128-bit Advanced Encryption Standard encryption and directory integration via the Lightweight Directory Access Protocol. Its integrated 2500, 7000 and 8000 systems start at $15,990 per site and go up to $59,990. The 800 and 550 series set-top units start at $4,990 per site. Its 1000 series single-user desktop units start at $5,490.

Sony Business Solutions & Systems Co.
Park Ridge, N.J.
http://bssc.sel.sony.com/Professional/
Sony's high-performance, low-cost systems have sold well to small and midsize businesses, Herrell says. Its PCS-1600 series set-top units start at $3,394; desktop units start at $3,994. On the high end, a packaged system capable of supporting six multipoint sessions sells for $21,300.

are shrinking. Video encoders now support up to 1,000-to-1 compression, delivering acceptable quality in as little as 128K bit/sec. per connection. "It's good-quality video, if you don't have a lot of movement," says Saxon, although Duncan says he considers 384K bit/sec. to be the minimum for acceptable quality. The newest standard, named H.264 by the Geneva-based International Telecommunication Union (ITU), will soon deliver DVD-quality video feeds using less than 1M bit/sec. of bandwidth.

Videoconferencing technology is also starting to converge with traditional Web conferencing systems, allowing IT to create a single interoperable and centrally manageable set of applications that may include data sharing, whiteboarding and streaming media. For example, Polycom's Web conferencing software, called WebOffice, works with its PC-based videoconferencing systems. And Web conferencing vendors are adding video to their services, although analysts say quality-of-service issues will keep most business videoconferencing off the Internet.

"Enterprise users are primarily using VPNs [virtual private networks] and dedicated private IP networks to ensure the quality of service, which cannot be offered by the public Internet," says Roopam Jain, an analyst at Frost & Sullivan Inc. in New York. And while some quality-of-service standards are in place today, analyst Lou Latham at Gartner Inc. describes them as "fluid and incomplete." Network administrators still worry about reliability and performance, he says. "There's an anxiety on the part of network administrators that their networks are going to get saturated," he says, adding that the key is to keep traffic segregated and prioritized so it moves quickly.

In addition, the ITU's H.323 interface standard for videoconferencing may give way to the Internet Engineering Task Force's evolving Session Initiation Protocol (SIP). That could ease integration problems when adding audio calls from voice-over-IP telephony systems, which use SIP or proprietary protocols, into a videoconferencing session. "That wasn't a problem with ISDN," Duncan says.

> **"There's an anxiety on the part of network administrators that their networks are going to get saturated.**
> LOU LATHAM, ANALYST, GARTNER INC.

Jain says videoconferencing also continues to face ease-of-use issues. For example, users may need to know the destination IP address or phone extension to establish a session. Some products allow the creation of an address book, but most can't access information already stored in an Active Directory or other enterprise directory infrastructure.

Despite its limitations, IP videoconferencing can pay off in organizations that require more than 30 hours of videoconferencing per month, says Giga analyst Elizabeth Herrell. Gartner's Latham is more cautious. "You can start by keeping your ISDN lines and test the IP waters, connection by connection," he says. He doesn't expect end-to-end reliability to be worked out until next year.

But Duncan says the technology hurdles are surmountable. "The bigger challenge is getting people comfortable using the technology."

Russell Kay, a freelance writer in Worcester, Mass., contributed to this story.

Videoconferencing Effort Goes Global

Dow Chemical has nearly completed the rollout of IP videoconferencing to 500 offices worldwide using Polycom iPower units, and it plans to eliminate 125 ISDN-based systems. CHRIS DUNCAN, global leader for e-communication technology, spoke with *Computerworld*'s Robert L. Mitchell about how the project is working out.

Why did you pursue IP videoconferencing? One reason was the reliability of ISDN. Those 125 sites were in 40 countries, and because of the questionable reliability of ISDN, it was never fully accepted beyond an executive tool. It didn't become part of the culture. We wanted to find a way to expand the endpoints, and video over IP seemed to make a lot of sense.

What's the payback? IP is significantly less money [than ISDN]. If we're going from the States to Pacific [Rim countries, it costs] probably 75% less. We're using the same bandwidth we use for everything else. We've allocated certain percentages of our [wide-area network] bandwidth to video only. It's the same pipe, but we've segmented the network. We have three-quarters of our deployment done. We're in 18 or 19 countries now.

How does the quality compare with that of ISDN? We had been running our IDSN at 128K bit/sec. Some of that was due to cost. When we decided to upgrade with the new iPower systems, we decided that we had to improve not only the reliability but also the picture quality. We're running 384K bit/sec. It's a minimum of three times better. There is some jerkiness in 384K bit/sec., but it's not as annoying.

Why not use audioconferencing? You really need to have some face-to-face to read the body language to see what's going on. If we can avoid one trip per month per room, the entire system pays for itself.

How are users accepting videoconferencing? We haven't seen a notable reduction [in travel] yet. The harder part is the cultural change. People are comfortable meeting face to face. When you put a monitor in between, you have to focus on the cultural changes. There are certain etiquettes that are different. And if your call goes down for two minutes, you have to understand that the meeting still saved you 30 hours [of travel].

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examples? Windows XP Professional offers built-in audio and video-conferencing capabilities that make the whole experience easy and intuitive for your end users. With the Send for Review feature, Office XP Professional lets users easily assign roles to everyone involved in the document review cycle, while automatically providing the correct tools for each reviewer and allowing changes to be easily merged back into the original document. And finally, several new features make deployment easier than ever. For more ideas about managing your desktops, visit **microsoft.com/desktop**

Escape From SQL Hell

Quick response to SQL Slammer deflects potential disaster. By Mathias Thurman

UPFRONT preparation helped my company ward off the SQL Slammer worm, which exploits a buffer overflow vulnerability in Microsoft SQL Server and creates a flood of packets, similar to a denial-of-service attack. But we still didn't totally avoid it.

Shortly after the worm appeared, we decided to run scans of our infrastructure to find and patch vulnerable systems. In the interim, we implemented Cisco Systems Inc.'s Network-Based Application Recognition (NBAR) feature on our core edge routers, configuring it to drop any packets that matched the signature of the SQL Slammer attack. The problem with NBAR is that routers are designed to route traffic, not inspect packet payloads. NBAR consumes a considerable amount of router resources and can lead to performance problems, so we didn't want to keep it in place any longer than necessary.

Notifying Users

Once the NBAR rules were set, we sent out a mass e-mail internally with a link to a Web page we had assembled. The page contained information on SQL Slammer, instructions on determining whether a particular system is vulnerable and a link to the patch, which mitigates the vulnerability. Only after we had completed our scans and were satisfied that our SQL servers and other impacted desktops were patched did we remove NBAR.

Ultimately, we were lucky, but we weren't 100% successful. A few stray servers were somehow infected. Even a week later, we still found an occasional system that had slipped through the cracks.

A few days after the initial SQL Slammer incident, I received a call from our network operations center reporting that our servers were under a denial-of-service attack. We have a limited capability to monitor bandwidth utilization on some edge network devices. Those utilization rates were extremely high, and network performance was suffering. So we pulled up data from our intrusion-detection system sensors, examined the packets and discovered an excessive amount of file transfer protocol traffic.

SECURITY MANAGER'S JOURNAL

It turns out that our company had just released a new software download that was in excess of 40MB, and the traffic was overloading our network. Until we could make significant changes in our systems, we decided to outsource the downloads by using Cambridge, Mass.-based Akamai Technologies Inc.'s EdgeSuite service.

The implementation went without a hitch. With a few modifications in our server configurations and some redirection, we were ready to go.

> **The problem with NBAR is that routers are designed to route traffic, not inspect packet payloads, and it consumes a considerable amount of router resources.**

Eventually, we will either upgrade our network to handle the load, outsource to a managed service provider or possibly stick with Akamai.

EDirectory Assistance

With that incident out of the way, I've begun searching for an easily implemented, inexpensive method of providing centralized access control for our Sun Solaris servers.

In the past, most Unix administrators just used the Unix Network Information Service (NIS). Because of some vulnerabilities in NIS, however, we shied away from that and focused on tools that would integrate with our Novell eDirectory service. We use eDirectory for all of our enterprise accounts and as a user-information repository for controlling access to PeopleSoft, Siebel and other applications. The new system must allow central control of username, password and home-directory information through eDirectory and must let the administrator dictate the log-in shell for each user.

We use RSA Security Inc.'s SecurID tokens for two-factor authentication, so the log-in shell will be the program that activates the SecurID software. After some research and phone calls, we decided to implement a Unix pluggable authentication module (PAM). Several PAMs are available, depending on what you want to integrate. We wanted credentials stored in an LDAP-compliant database, so we used the PAM_LDAP program. For this to work, we needed both the PAM libraries and the LDAP client installed on our Solaris servers.

Unfortunately, we couldn't get the native Solaris LDAP client to work with PAM and properly authenticate to our Novell eDirectory. Instead, we had to use a third-party LDAP integration tool developed by Melbourne, Australia-based PADL Software Pty. The PADL libraries let us successfully direct the authentication requests to eDirectory. We have conducted some preliminary testing, and almost everything seems to work as advertised.

One issue that we're still trying to resolve, however, is establishing encryption between the Solaris resource and the eDirectory server. We initially thought that we could implement Secure Sockets Layer encryption for this, but it had problems. We're now experimenting with the IPsec protocol, but that will require additional configuration on each Unix resource we want to protect.

Adding Features

The other issue we face is support for additional features outside of the authentication portion of the deployment. For example, we might eventually want to enable netgroups (which group together machines and users with identical resource access rights for easier administration) and Role-Based Access Control.

When using PAM and the PADL libraries with Solaris 2.8 and eDirectory, we can't configure these additional features. However, we know through our testing of Solaris 9 and Netscape's iPlanet LDAP server that this functionality is available. So in theory, it should work with the LDAP-based Novell eDirectory. Perhaps I'll have the answer by next time.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com, or join the discussion in our forum:

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To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**

SECURITY LOG

■ USER REVIEW

Aegis Client

Meetinghouse Data Communications Inc. Portsmouth, N.H. www.mtghouse.com

One problem we discovered with our Cisco wireless LAN is that its implementation of Lightweight Extensible Access Protocol (LEAP) authentication works only with Cisco's wireless PC cards and software. Meetinghouse Data Communications' Aegis Client addresses this issue by providing LEAP authentication support that works with most vendors' wireless client software.

Our installation was painless, and I was up and running with LEAP and my Proxim Orinoco wireless card in minutes. I still had to run Proxim Inc.'s client software and then run the Aegis Client software on top of that. But a new version incorporates client software and LEAP support in one package. Pricing starts at $39.99 per workstation.

– Mathias Thurman

Certification for Security Managers

The Information Systems Audit and Control Association in Rolling Meadows, Ill., has launched the Certified Information Security Manager (CISM) certification. CISM is aimed at experienced information security managers; applicants must have three years of experience and pass a four-hour, 200-question exam.

For more information, go to *www.isaca.org/cism.htm.*

Lindows Antivirus

San Diego-based Lindows.com Inc. has introduced the first antivirus software tuned specifically for Lindows, its Linux-based desktop operating system. The new software, VirusSafe, is based on Central Command Inc.'s Vexira Antivirus for Linux Workstation software. VirusSafe sells for $29, which includes one year of virus-definition updates.

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Agenda Snapshot*

For details, updates, and to register visit www.snwusa.com/expo

*subject to change

Monday, April 14
(Pre-Conference Activity and Tutorial Sessions)

9:30am-11:00am	Primer
12:00pm-5:00pm	Golf Outing
1:00pm-2:00pm	SNIA Tutorial Sessions - choose from five different sessions
2:00pm-2:10pm	Break
2:10pm-3:10pm	SNIA Tutorial Sessions - choose from five different sessions
3:10pm-3:20pm	Break
3:20pm-4:20pm	SNIA Tutorial Sessions - choose from five different sessions
4:20pm-4:30pm	Break
4:30pm-5:30pm	SNIA Tutorial Sessions - choose from five different sessions
7:00pm-9:00pm	Pre Conference Networking Reception

Tuesday, April 15
(General Conference - Day One)

7:15am-8:15am	Continental Breakfast
8:30am-9:15am	Opening Keynote: Regis McKenna
9:15am-12:00pm	General Sessions
12:15pm-1:30pm	Networking Luncheon
1:45pm-4:00pm	General Sessions
4:00pm-5:30pm	Technical, Technical/Business and Business Tracks
5:30pm-6:30pm	Expo, Buffet Dinner, Interoperability and Solutions Demo

Wednesday, April 16
(General Conference - Day Two)

7:15am-8:15am	Continental Breakfast
8:30am-9:05am	Opening Keynote: David Chamberlain
9:15am-12:00pm	General Sessions
12:00pm-1:30pm	Expo, Buffet Luncheon
12:00pm-7:15pm	Interoperability and Solutions Demo Open
1:45pm-3:50pm	General Sessions
3:50pm-4:00pm	Break
4:00pm-5:00pm	Technical, Technical/Business and Business Tracks
5:15pm-7:15pm	Expo Open
7:30pm-9:00pm	Gala Evening

Thursday, April 17
(Tutorial and Workshop Sessions)

7:30am-8:30am	Continental Breakfast
8:30am-11:45am	Technical, Technical/Business and Business Tracks
11:45am	Conference Concludes

Register Today!

Options for IT End-Users*	Pre-Registration (through April 11th)	On-Site Registration (after April 11th)
General Conference Package (Apr. 15, 16): (Includes Expo, Meals and Receptions)	$1,095	$1,245
Total 4-day Package (Apr. 14, 15, 16, 17): (Includes General Conference Package; Technical and Business Tracks; SNIA-produced Tutorials; SNIA-Certification "Test-Ready" Courses; Expo, Meals and Receptions)	$1,490	$1,690
Options for IT Vendors**		
Total 4-day Package (Apr. 14, 15, 16, 17): (Available to Sponsoring Vendors and their Resellers/Integrators; Industry Consultants; and Storage Solutions Implementors)	$1,490	$1,690
Non-Sponsoring/Exhibiting Vendor Package:	$5,000	$5,000

* See IT End-Users description on the Registration Application on the reverse. ** See Non-Sponsoring Vendor description on the Registration Application on the reverse.

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Pre-Conference Golf Outing

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CODE: EXPO

Options for IT End-Users*	Pre-Registration (through April 11th)	On-Site Registration (after April 11th)
General Conference Package (Apr. 15, 16): (Includes Expo, Meals and Receptions)	❑ $1,095	❑ $1,245
Total 4-day Package (Apr. 14, 15, 16, 17): (Includes General Conference Package; Technical and Business Tracks; SNIA-produced Tutorials; SNIA-Certification "Test-Ready" Courses; Expo, Meals and Receptions)	❑ $1,490	❑ $1,690
Options for IT Vendors**		
Total 4-day Package (Apr. 14, 15, 16, 17): (Available to Sponsoring Vendors and their Resellers/Integrators; Industry Consultants; and Storage Solutions Implementors)	❑ $1,490	❑ $1,690
Non-Sponsoring/Exhibiting Vendor Package:	❑ $5,000	❑ $5,000

* IT End-Users are defined as those who are attending Storage Networking World with an intent (and an IT spending budget) to potentially buy/purchase hardware/software/services/etc. from our conference sponsors and exhibitors. As such, account representatives/business development from any company, analysts, venture capitalists, and anyone else attending who does not have IT purchasing influence within their organization are excluded from the "IT End-User" designation. Enforcement of this interpretation and policy is at the sole discretion of Computerworld. Questions? Please call 1-800-883-9090.

** Vendors are encouraged to participate at Storage Networking World through sponsorship. (Details are available by calling Ann Harris at 1-508-820-8667.) Alternatively, vendors (as well as venture capitalists, equity analysts, and other "non-IT end-user" professionals as defined by Computerworld), may apply for registration at the "non-sponsoring vendor" rate. Determination of what constitutes a "non-sponsoring vendor" registration is at the sole discretion of Computerworld. You will also be required to adhere to our non-solicitation policy posted on-site.

Registration Information: (This section must be completed in order to process your application)

First Name: _____ Middle Initial: _____ Last Name: _____

Title: _____ Company: _____

Street Address: _____ Suite, Apt., etc.: _____

City: _____ State/Prov: _____ Zip/Postal Code: _____

Country: _____ Phone Number: _____ Extension: _____

Fax Number: _____ E-Mail Address: _____

Badge Name: _____ ❑ Special Services Required? (Please attach written description)

Would you like to receive information about playing in the golf outing on Monday, April 14th (PM)? ❑ Yes ❑ No

Please indicate your preferred conference shirt size: ❑ S ❑ M ❑ L ❑ XL ❑ XXL ❑ XXXL

Attendee Profile: (This section must be completed in order to process your application)

SECTION A - FOR IT END-USERS ONLY

Your Business/Industry:
- ❑ Transportation/Utilities
- ❑ Mining/Oil/Gas
- ❑ Media/Publishing
- ❑ Banking/Finance/Insurance
- ❑ Telecommunications
- ❑ Wholesale/Retail (Non-IT)
- ❑ Advertising/Marketing/Public Relations
- ❑ Education
- ❑ Government/Military
- ❑ Healthcare
- ❑ Manufacturing (Non-IT)
- ❑ Other

Your Job Title/Function:
- ❑ CEO/COO/Chairman/President
- ❑ CIO/CTO
- ❑ VP/GM/Director
- ❑ IS/IT Director/Manager
- ❑ Other IS/IT Department Manager/Supervisor
- ❑ Other Corporate/Business Manager
- ❑ Corporate/Business Staff
- ❑ Consultant (Internal) or Other

Select item below that most closely matches your involvement in IT decisions:
- ❑ Specify features/Technical requirements
- ❑ Evaluate/Recommend Products, Brands, Vendors
- ❑ Create strategy/Determine the need to purchase
- ❑ Set budget for expenditure
- ❑ Authorize/Approve purchase
- ❑ None of the above

Employees in your entire Company:
- ❑ 10,000+
- ❑ 5,000 - 9,999
- ❑ 1,000 - 4,999
- ❑ 500 - 999
- ❑ 100 - 499
- ❑ Less than 100

Estimated annual revenue of your entire company:
- ❑ $10 Billion+
- ❑ $5 Billion - $9.9 Billion
- ❑ $1 Billion - $4.9 Billion
- ❑ $500 Million - $999 Million
- ❑ $100 Million - $499 Million
- ❑ $50 Million - $99 Million
- ❑ Less than $50 Million

Annual company IT budget (All IT products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

Annual company IT budget (Storage products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

Your personal IT spending authority (All IT products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

Your personal IT spending authority (Storage products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

SECTION B - FOR IT VENDORS ONLY

Your Business/Industry:
- ❑ VAR/VAD/ASP/System Integrator
- ❑ Industry Consultant/Storage Solution Integrator
- ❑ Manufacturing (IT)
- ❑ Computer Retailer/Dealer/Wholesaler
- ❑ Software Development (Storage)
- ❑ Other Computer Related (Non-Storage)

Your Job Title/Function:
- ❑ CEO/COO/Chairman/President
- ❑ CFO/Controller/Treasurer
- ❑ VP/GM/Director
- ❑ Sales/Marketing/Product Staff
- ❑ CIO/CTO/Other IS/IT Manager
- ❑ Engineering Staff
- ❑ Press

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Signature of Card Holder: _____

Cancellation Policy *(All of the below options require written notification.)*
In the event of cancellation, the registrant has three options:
1) He or she may substitute another attendee for this conference.
2) He or she may transfer this registration to the Fall 2003 Storage Networking World* conference, if written notice is received by March 31, 2003.
3) The registration fee will be refunded, less $250 service charge, if written notice is received by March 31, 2003.

Computerworld reserves the right to limit and/or refuse any registration for any reason.

Schedule of Conference Events *(subject to change)*

Monday, April 14, 2003
- Pre-Conference Golf Outing
- Pre-Conference Networking Reception
- Tutorial Sessions

Tuesday, April 15, 2003
- General Conference
- Interoperability and Solutions Demo
- Exposition

Wednesday, April 16, 2003
- General Conference
- Interoperability and Solutions Demo
- Exposition
- Gala Evening

Thursday, April 17, 2003
- Tutorial Sessions

BRIEFS

Movex Gets XML

Intentia International AB, a customer relationship management and enterprise resource planning application vendor in Sweden, is adding XML Web services technology to its Movex flagship suite. The Movex Web Services Framework will include a tool kit and runtime server. The product will ship in April.

Expand Networks Boosts Accelerator

Expand Networks Inc. in Roseland, N.J., has added a new feature to its Accelerator traffic-compression appliance that improves the performance of voice over IP on low-bandwidth data links up to 128K bit/sec. Expand offers a free upgrade to current customers with service contracts.

NetIQ Updates SQL Management Suite

NetIQ Corp. has released Version 2.0 of its year-old SQL Management Suite, with new features including a revamped user interface in one module and additional reporting tools in another. The San Jose vendor's offering is intended to ease administration of Microsoft Corp. SQL Server production systems by providing configuration management, diagnostic and recovery functions. Pricing for the full suite starts at $15,000 for a five-server starter pack.

ERoom Offering Gets Addition

Enterprise content management software vendor Documentum Inc. announced its first integrated product offering resulting from its acquisition of collaboration technology provider eRoom Technology Inc. last year. ERoom Enterprise lets corporate workers collaboratively create, share, manage, reuse and archive content, according to officials at the Pleasanton, Calif., firm. Upgrade pricing starts at $25 per seat.

ROBERT L. MITCHELL

Don't-Ask-Don't-Tell E-Commerce

WHEN IT COMES to IT security, good technology can't protect an organization against bad policy. Judging from the way the banking industry handled the recent theft of more than 8 million credit card account numbers [QuickLink 36530], that's a lesson that major U.S. credit card associations and issuers have yet to learn.

ROBERT L. MITCHELL is *Computerworld*'s technology evaluations editor. Contact him at robert_mitchell@computerworld.com.

The situation is unlikely to improve in the near term because the financial services firms that control most credit cards see little economic incentive to change their ways. Those most at risk of incurring losses include consumers (through identity theft), and merchants that accept "card-not-present" transactions.

The card associations' policies, as demonstrated, could be described thusly: Don't publicize credit card thefts in any way; don't require card issuers to notify affected card owners unless they ask; don't share the list of compromised account numbers with merchants; and don't require banks to reissue stolen cards. And don't worry — banks will monitor accounts for "unusual activity" with automated, high-tech monitoring tools.

Card-not-present transactions aren't protected by the same zero-liability policy given to consumers and merchants at brick-and-mortar stores, where clerks can physically check the credit card and obtain a signature. This puts online vendors at a competitive disadvantage.

Meanwhile, credit card fraud is increasing. In early February, the largest electronic break-in to date took place at credit card processor Data Processors International (DPI) in Omaha. Some 8 million Visa, MasterCard and other accounts were affected. Yet customers wouldn't have known about the breach until their statements started arriving if it hadn't been for Citizens Bank, which decided to recall 8,800 affected cards.

If accounts are used fradulently, how much damage will online merchants suffer before the monitoring systems catch on and defuse the situation? Probably nothing will happen. But merchants won't know for sure until cardholders receive their statements.

What's worse, this cloak of secrecy could ultimately erode cardholder confidence and trust. For example, the story of the DPI incident surfaced in the press on Feb. 17. DPI acknowledged the incident on the 20th. A spokesperson declined to say when the break-in occurred, but unofficial reports put it early in the month — perhaps as early as Feb. 3 or 4. Visa said it "immediately notified all affected card-issuing financial institutions." Yet one bank manager I spoke with said she couldn't confirm whether specific cards were on the list until Feb. 19. Her bank didn't start receiving the compromised account numbers until Feb. 17 and received the last batch two days later. Was this case the exception?

To their credit, some card issuers are moving to protect online transactions with new authentication programs. For example, MasterCard SecureCode and Verified by Visa require the buyer to use a password before making a purchase. Merchants who obtain passwords from buyers are protected from chargebacks. But most buyers don't have one yet. MasterCard and others should follow Visa's lead and protect e-commerce providers that *request* passwords from buyers.

This shifts the cost of stolen data away from merchants but doesn't solve the problem. Credit card companies should also question whether having dozens of processing companies handling customer data makes sense in a Web-connected world. Or whether security measures that address the way card transaction processors, issuers and merchants handle and protect account data should be more strictly dictated and policed. Or whether it makes better business sense to assume a policy of more open disclosure with cardholders.

In a world where credit card numbers can be used for fraud or identity theft, organizations have a moral obligation to disclose such compromises to cardholders and merchants as soon as a security hole is closed.

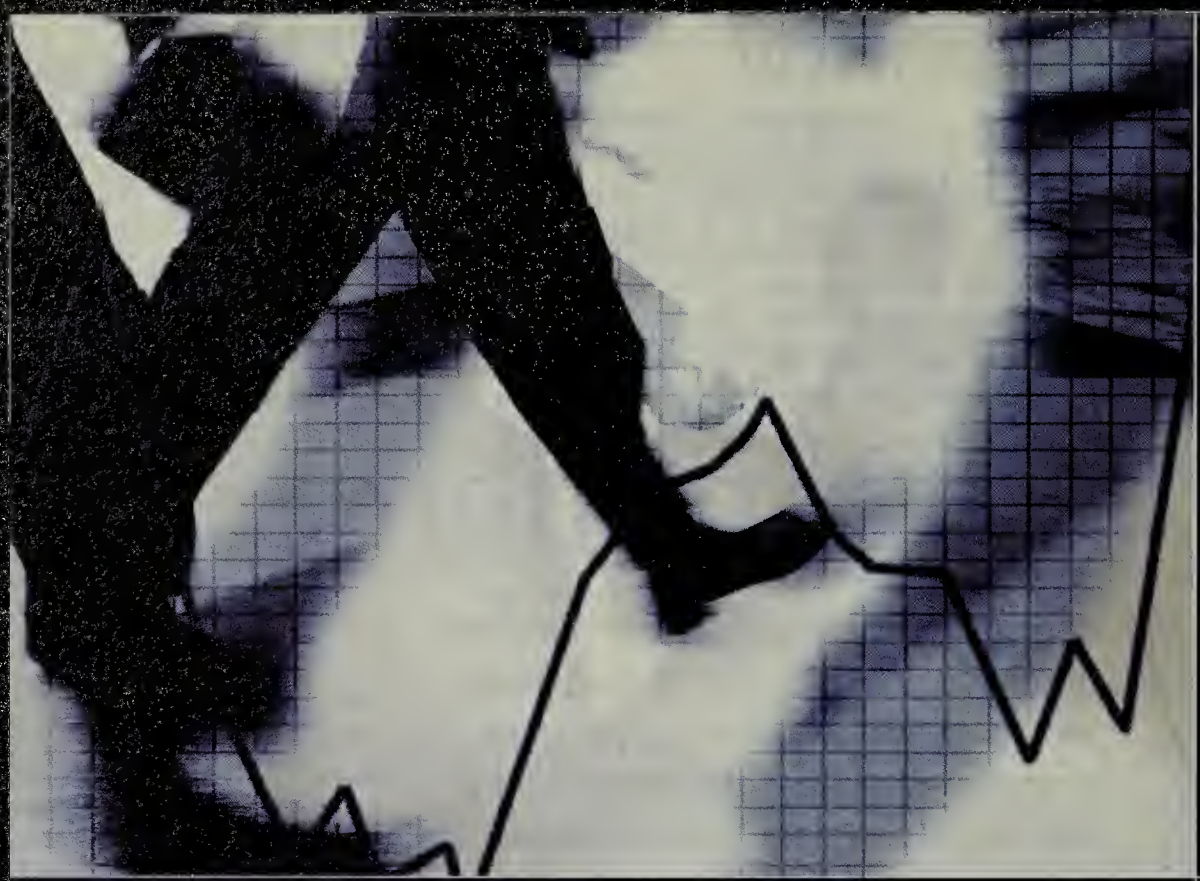
The industry worries about the expense of reissuing cards. Yet banks have spent a lifetime building trust, and serious erosion of consumer confidence could cost far more than simply replacing those cards. It could cost billions in lost sales to e-commerce merchants that are dependent on credit card payment systems.

The current policies are bad for e-commerce, bad for consumers and, ultimately, bad for business. The industry should make changes now, before consumers finally wake up to what's going on and legislators step into the breach.

GET THE FACTS

Read vendor statements, proposed legislation and related research and discussion on the issues on our Web site:

QuickLink 36613
www.computerworld.com



DIRECTIONS 2003

Prepare for the New Computing Landscape

March 20, 2003
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March 26, 2003
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In a time of economic uncertainty, a sense of caution has surfaced in the IT and telecom industries. IT buyers are spending less, hardware is becoming more commoditized, software is in a complexity crisis, and services contracts are decreasing in size. At the same time, the industry is seeing some positive signs, including more demand to support mobility and an increase in broadband access to the Internet.

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- How can my company use a vertical strategy to capture market share?
- How will new technologies in the communications industry provide me with a better understanding of how to generate new sources of revenue and create new business models?
- How will the home network evolve?
- What is the outlook for the structure of the server industry?
- How can I understand the increasing complexity of the services industry and identify key opportunities for growth?
- Where is the money in licensing business models?
- How will broadband markets and technologies evolve?
- What is the state of the global wireless infrastructure?

... and much more.

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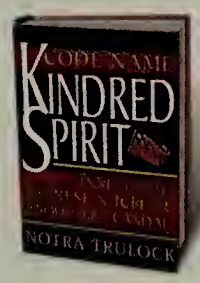
A Setup for a Security Nightmare
Author Notra Trulock details the appalling state of computer security at the Department of Energy during one of the most infamous espionage scandals in recent decades, and what the corporate world can learn from it. **Page 40**



ROI: Whose Job Is It, Anyway?
Columnist John Berry asks, "Why can't IT evolve into a value-added business partner that could help business units with economic value management tasks?" **Page 41**

QUOTE OF THE WEEK
"The difference between portals which succeed and those that don't is clearly the amount of business involvement."
– Bob Rugare, portal consultant, Cap Gemini Ernst & Young

Follow THE Money

Here are 10 ways to assess the financial health of your IT vendors. By Kathleen Melymuka

CHOOSING A STRATEGIC VENDOR is a long-term commitment that involves a lot more than technology. Before you tie your company's fortunes to those of a supplier, you'd better dig deep into your would-be partner's financial health. Here are 10 questions that vendor-management veterans say can help you decide whether your intended is really the one for you.

1 What's new about the company? Even if you think you know all about a technology vendor, check again. Today's Wall Street darling could be tomorrow's Enron. Tap a variety of sources for your intelligence, from Dun & Bradstreet Inc. (D&B) to your industry peers. "You may find that this new company that seems really hot used to be this old company that was really outdated," says Pamela Hollington, a director at Rebound Consulting Ltd. in North Vancouver, British Columbia. Beware of companies that change their names to distance themselves from poor financial performance.

2 How does it conduct business and with whom? Some IT vendors have reputations as being unethical; others are just difficult to do business with. Either way, it pays to find out. "I can't believe how many clients actually don't check references," says Eileen M. Birge, an analyst specializing in vendor relationships at The Concours Group in Kingwood, Texas. "It sounds so basic, but they say, 'We were in a hurry,' or, 'It was really close to the end of the quarter, and they offered a great deal if we signed right then.' "

Go beyond references. Check the vendor's ethics with various sources, including customers, says Pat Fausett, a strategic alliances manager for software and intellectual property at Agilent Technologies Inc. in Santa Clara, Calif. Many vendors list customers on their Web sites, and you can also ask among your peers. Then call the customers' accounting departments and ask what it's like to work with that vendor. Is billing timely and accurate? Are hidden "gotchas" in contracts costing extra? Is the vendor flexible about license transfers in the case of a spin-off? Does it work with the customer on creative ways to meet peak demands?

3 How has the vendor's executive team performed? Look at the backgrounds of the officers, especially the chief financial officer, says Fausett. "See where they've been, what they've done or haven't done," she says. For example, does the CFO have a track record in other successful companies, or is he learning on the job? Did he leave a former company under unusual circumstances? Has his name been linked to bankruptcies or Securities and Exchange Commission investigations?

If his last company is unknown to you, run the company name through a search engine and see what comes up. If an officer has jumped from company to company, that's also a red flag. "Look at where they were jumping from and to," Fausett says. "Think about what caused that."

ANDREW SKWISH

4 What is the vendor's market position? If you're taking a risk on a new technology, be sure you've got a market leader, says Birge. "Unless they're a leader, you don't want to be out there on the edge with them." To get a quick read on the vendor's market position, check Web sites such as Hoovers.com and The Motley Fool *(www.fool.com)*. But beware of a market leader with no followers, says Greg Schueman, vice president and chief technology officer at Mercury Insurance Group in Brea, Calif. That can indicate an insufficient market for the product. "You want to see several strong competitors," he says. "You have to look at the viability of that particular market segment, not just the company."

5 What is the vendor's financial position? For public companies, use resources such as the vendor's Web site (see box) and D&B to check financials and earnings statements. "Go to Hoover's and pull some data there," says Schueman. "You can just pay for what you need. Look at what's happening with their business model. What kind of customers are coming on board? Who are their competitors? Look for a company that is profitable and becoming increasingly so. You don't want to see that they're gaining market share by burning cash."

A 10-K report, which publicly traded companies must prepare annually for the SEC, is a "gold mine," Fausett says. It includes information such as financial statements and supplementary data; analysis of the company's financial condition; quantitative and qualitative disclosures about market risk; information on legal proceedings, directors and officers; and additional resources. In many cases, the 10-K is available on the vendor's Web site.

For a privately held vendor, ask the owner for permission to talk with the bank that represents the company. The bank probably won't give you numbers, Fausett says, but it will give an indication of the vendor's debt ratio and the outlook for its financial health.

6 What is the vendor's ability to assume financial risk? A vendor can promise you anything, but can it deliver? If it goes belly up, it may not have the financial resources to refund your losses, regardless of good intentions and contract assurances. "You have to be sure in the event they fail that they can keep you whole," Birge says. One company she worked with was dealing with a start-up application service provider. The customer required the vendor to supply financial statements every month, including certification that it had six months' worth of working capital on hand. The contract stipulated that if the capital ever dipped below six months' worth, the customer had the right to pull out of the agreement and bring the applications back in-house over several months.

7 Does the vendor have pending or past lawsuits? "Most salespeople won't say, 'By the way, we're being sued,' " Fausett notes, but financial statements will include a section on litigation judgments against the company. Check its Form 10-K and ask your legal department to do a search for past litigation against the vendor. "Learn who has been suing the company and why," Fausett says. Also check whether it has settled out of court or gone to trial. "That gives me a flavor for how they deal with adversity," she says.

8 Is there an acquisition on the horizon? You sign a contact with a vendor you really want to work with, and two weeks later, the vendor is acquired. "There is so much consolidation in the industry that this comes up often," says Hollington. The product you're about to buy may be important to the vendor, but the company buying the vendor may not be interested in supporting it.

Schueman learned this the hard way once when a software vendor he was dealing with went bankrupt. The company's assets were acquired by another company, and the new owner de-emphasized the product. "The lesson for me was that you have to look extremely carefully at the likelihood that a product will get the investment it needs to push forward," he says.

If the company is public, you should be able to sniff out an impending acquisition. Also, ask specifically in the request for proposals about future organizational plans and the long-term strategy for the product.

Once you have gathered your intelligence, make sure your investigations are ongoing. "For a strategic supplier, looking at those things is not a one-time event," says Larry Graham, vice president of IT vendor management at San Mateo, Calif.-based Inovant, a wholly owned transaction-processing subsidiary of Visa International Inc.

John Moon, CIO at Baxter International Inc. in Deerfield, Ill., agrees. A while ago, his company was doing business with an Internet service provider that was experiencing financial difficulties. The vendor repeatedly assured Moon that it was able to meet its commitments and was in serious discussions with a number of companies about a potential acquisition. Then one day, it laid off virtually its entire workforce without warning. Moon got the news from laid-off employees. "We trusted those folks because they had been straight with us," he says. "We didn't verify as much as we should have."

Now Moon monitors his top 30 IT vendors as he would the competition or a potential acquisition to see how well they're executing against their business plans. He watches their financial performance on a quarterly basis and looks at their balance sheets to see whether they are consuming cash and will need to borrow money and how that will affect products and services. "Now we use the old Ronald Reagan approach," he says. "Trust but verify."

Continual questioning will help you to detect impending changes that may affect your business and to anticipate problems early so you can manage them.

9 Who is your real partner? If your intended partner is really the local value-added reseller (VAR) of the big vendor's products rather than the big vendor itself, that's who you need to know about. "Finding out [that] Great Plains is a stable Microsoft company is interesting," Hollington says. "But it's more interesting to know the VAR [I deal with] in Vancouver is about to be sold to someone else."

10 Is the vendor committed to the technology? Are you buying at the end of a product cycle? Is the vendor more interested in developing the next big thing than supporting what you're buying? "Look at the expected life of the technology offered and the vendor's commitment to that technology," Birge advises. What are the vendor's research and development expenditures in the area you're interested in? she asks. How innovative has it been in your industry or field? You can get R&D numbers from the vendor's 10-K, but don't neglect your own internal intelligence. If you've worked with the vendor before, has it brought innovative ideas and interesting thinking that made you sit up and take notice? ◗

Melymuka is a Computerworld *contributing writer. Contact her at kmelymuka@earthlink.net.*

ANDREW SKWISH

It Doesn't Take Sherlock Holmes

Much of the intelligence you need about a prospective vendor partner may be just a click away. To see how much information we could get on a prospective vendor just from its own Web site, we picked **Symantec Corp.** in Cupertino, Calif., at random. This is what we found:

CORPORATE INFORMATION PAGE

- Company profile
- Four years of revenues
- Basics on technology and services offered
- Customer list
- Corporate history highlights
- Directors and top executives
- Worldwide facilities and service centers
- Ability to drill down to:
  - Latest news
  - Information on partnerships, acquisitions and alliances
  - Investor relations
  - Executive biographies

INVESTOR RELATIONS PAGE

- 2003 quarterly financial results
- Toll-free fax number for free copies of SEC filings and other financial documents
- Ability to drill down to:
  - Additional financial information
  - Investor resources
  - Details on corporate direction

FINANCIAL INFORMATION PAGE

- Financial news releases
- Details about recent alliances
- Annual reports since 1996 (including 10-Ks)
- Other SEC filings

INVESTOR RESOURCES PAGE

- Summary of recent quarterly financial results
- Presentation for investors
- List of research analysts who report on Symantec

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DRAWING ACROW

How to build and maintain portals that users will really use. By Connie Winkler

MICHAEL MORGENSTERN

COMPANIES typically plan and deploy software portals to provide employees, customers and suppliers with a single, Web-based access point for data, content and both new and legacy applications across the enterprise.

But things don't always go as planned. Too often, companies build portals, but users just don't come.

"So many firms with less-than-hoped-for portal results repeat that story that it has almost become a cliché in the industry," says Nathaniel Palmer, an analyst at The Delphi Group in Boston. In a December Delphi survey of 500 companies spanning 20 industries, 37% of the companies that had installed portals said they were disappointed by the lack of "adequate interest among target users."

According to Delphi's findings, the reason people aren't using portals is because there isn't a strategy or life cycle for keeping people involved — what Delphi calls change management, explains Palmer. "There's a lack of strategy beyond the technical architecture," he says.

Indeed, too many companies got caught up in the techie hoopla sur-

rounding portal technology, focusing mostly on implementation and integration issues, according to Delphi's analysis of its survey findings. Meanwhile, critical usability issues, such as educating users about the portal's capabilities, training them to use it efficiently and marketing the value of using the portal, haven't received the necessary attention.

"It seems obvious, but time after time, I have seen the enterprise value proposition for a portal be that it's going to save everyone in the company 20 minutes a day," says Bill Ives, a partner at Accenture Ltd. in Boston. "That's a little fuzzy," he says. "What are they supposed to do with that 20 minutes?"

Start at the Top

Another problem many companies have is failing to involve top management from the very beginning of a portal project. It's critical to pay attention to the requirements of top managers because they are often the busiest of potential users, and they're frequently on the road or located remotely, making them among the hardest to bring to the portal.

"Bringing the portal to them through off-line access and proactive notification is one of the best opportunities for successful portals," notes Palmer.

Experts estimate that project portal teams need to devote 30% to 40% of their time gathering business requirements and getting top managers involved from the start. "The difference between portals which succeed and those that don't is clearly the amount of business involvement the portal project receives and the level of integration with the business," says Bob Rugare, a portal consultant at Cap Gemini Ernst & Young in Atlanta.

Portal project teams should be always looking to add value to the business, Rugare says. That often begins with addressing a very specific business problem.

At Du Pont Co.'s $3.8 billion Performance Coatings group, the issue was content management.

"We have a very large number of documents for marketing: brochures, press releases, warranty information on products and general support content for our distributors and [car repair] body shops," explains Catherine Marchand, the group's e-business strategy manager. "Our salesmen were driving around with 50 pounds of obsolete literature in their trunk."

Du Pont opted to deliver the information through a Web-based portal, using technology from Bowstreet, a portal software and Web development tools company in Tewksbury, Mass. Du Pont wanted the ability to customize information about its half-dozen coating brands. It also wanted each of its 2,500 distributors and repair shops worldwide to see the relevant customized brand information displayed in almost 4,000 different site views, which the technology would allow it to do.

Beyond Custom Content

Few disagree with the content management value of portals. "The two go hand in hand," says Ives, who tells of call center staffers all working off the same page when wireless call plan information is consolidated in a portal.

"Commonality of content both increases business efficiency, because it's cheaper to do it once, and increases the effectiveness of the information, because it's consistent across multiple channels."

Since the content capability was initiated, Du Pont's site has grown rapidly. The body shops can now get training, benchmarking tools and car paint color formulas via the portal. There's also a job-posting and résumé service, Marchand says. And for the distributors, Du Pont is researching adding order-tracking and order-accuracy capabilities.

"Southwire was trying to be ahead of the game – at the urging of our CEO. With all this Internet hoopla, the thinking was that surely there was something we could do with it.

SHEILA SIMPSON, WEB DEVELOPMENT MANAGER, SOUTHWIRE

Portal project teams must think long term, advises Ben Gaucherin, chief technology officer at Sapient Corp., a technology consulting company in Cambridge, Mass.

"Have a clear vision and commitment to the long-term picture. . . . Ask what [the portal] is going to do for your business in the long run," Gaucherin says. "Over and over I've had conversations with clients who are about to buy an expensive piece of software, and it looks very much like a short-term value."

It's also important to think enterprisewide, not merely department by department. "The easy departments to pick off for portal projects are those that stand alone," says Rugare. A human resources portal, for example, may enable employees to enter their own address changes into the HR system and thus eliminate phone calls to HR staffers. But that doesn't solve the problem of updating all corporate systems with the change.

"Clearly, if you can implement a portal that's integrated to your supply chain, your suppliers and partners or distributors, or to your customers, the value goes up almost geometrically," he says. ◗

Winkler writes about the management of technology from Seattle and is Computerworld*'s former New York bureau chief. Contact her at winklerconnie@yahoo.com.*

Finding the Real Need: **Productivity**

Southwire Co., a $1.7 billion, Carrollton, Ga.-based manufacturer of cable and wire, didn't set out in 1999 to build an ideal portal. The privately held firm just wanted a spot on the Web where customers could place orders. It also wanted to clean up multiple internal and corporate Web sites, which had been set up by IT on behalf of various departments, each using different Web development software.

But four years later, Southwire's portal is yielding impressive business results. Customer orders are up 33%, and 25% of all orders are electronic, with online customers ordering twice as many items as those who place orders via fax, telephone or electronic data interchange. And thanks to content management and workflow capabilities added in the past year, Southwire's managers can approve and post announcements to the portal, without involving IT.

"We had several independent Web sites and a fairly robust e-commerce site. The portal provides an umbrella to bring all those separate Web sites under, along with providing a single sign-on, multilevel security access, customization and personalization," says **Sheila Simpson**, a Web development manager in Southwire's IT Services group. The underlying portal technology is from Sybase Inc. in Dublin, Calif.

"Southwire was trying to be ahead of the game – at the urging of our CEO," recalls Simpson. "With all this Internet hoopla, the thinking was that surely there was something we could do with it."

The portal was first funded as a research and development effort, separate from IT services. Southwire's initial portal offered only 1,200 commonly ordered products out of the company's 65,000 stock numbers.

The emphasis wasn't on creating a "pretty front-end storefront" for the ordering site, according to Simpson. The true business need was cutting costs associated with processing lots of paper and increasing productivity.

"We didn't want the behind-the-scenes manual processing," says Simpson. "Southwire [in 2000 and 2001] was hit, like a lot of other companies, with trying to become more efficient. We did not need to create more work, we needed to eliminate work, to streamline," she says.

Thus came the emphasis on integrating the order site to the back-end systems. The company eliminated a significant chunk of manual work, which means fewer telephone calls to answer and less faxed information to rekey into the computer system.

The push to streamline operations is a big part of the portal popularity, and not just at Southwire, according to Raj Shah, manager of business consulting at Sapient. "They're looking for consolidation of systems and processes . . . and portals are the [user interface] of technology consolidation."

– Connie Winkler

A Setup for A Security Nightmare

Lessons learned at the Department of Energy can be applied to the corporate world. By Dan Verton

Q&A *A new book by* **Notra Trulock,** *former director of intelligence at the U.S. Department of Energy, details how apathy and politics can infect the decision-making of senior managers and create a security nightmare for frontline administrators.*

Code Name Kindred Spirit *(Encounter Books, 2003) takes readers inside the Chinese nuclear espionage scandal that occurred between 1995 and 2001 at the Los Alamos National Laboratory and led to the DOE's investigation of nuclear scientist Wen Ho Lee. Trulock also sheds new light on how senior DOE management contributed to the appalling state of computer and enterprise security that contributed to the possible disclosure of the U.S.'s most sensitive nuclear secrets.*

In an interview with Computerworld, *Trulock offered insight into how mismanagement of security issues at the highest levels of an organization can have devastating results.*

In your book, you wrote about many management and leadership shortcomings at the DOE, and especially how those shortcomings had a debilitating effect on enterprise security. Can you expand on a few examples that might offer some sober lessons for large corporations? Most importantly, I think, security was sharply devalued by the Energy Department and senior lab managers during the 1990s. It is common knowledge that budgets were run down and both manpower and training were sharply cut back. By far the worst offense, however, was the corruption and manipulation of security standards and measures of performance imposed by these officials.

Time and again, senior managers fudged or simply suppressed the results of security exercises, evaluations and self-assessments. More than once, senior lab managers were caught red-handed pressuring security officials to revise upward poor marks on security exercises. In other cases, the outcomes of such exercises were rigged to conceal vulnerabilities. Inevitably, senior management officials also had to suppress and silence those security officers unwilling to go along with the coverups.

You also wrote that you "witnessed many incidents in which CI [counterintelligence] officers were asked to report on the same people who wrote their performance appraisals, granted raises and approved budgets." What lessons and suggestions should come out of this for large corporate security programs that might be wrestling with finding the right management structure? I don't know whether the problems I witnessed are unique to the national labs. As counterintelligence was de-emphasized [along with security] at the labs in the 1990s, CI units were pushed further down the lab structure to the point that multiple layers of management existed between CI officers and the lab director. Consequently, CI [and security] problems rarely were brought to the attention of the lab directors or their senior management group. For a time at Los Alamos, the CI [group] reported to a unit that was also responsible for hallway maintenance and replacing burnt-out light bulbs.

First and foremost, large corporate enterprise security units should enjoy high visibility within the enterprise and report directly to either the chief executive or chief operating officers. The further down a [security] unit is in the corporate structure, the greater the potential for interference and obstruction in the performance of the unit's mission.

For companies that have large volumes of intellectual capital and proprietary research to protect, what is your advice on how to achieve an appropriate level of security while at the same time maintaining enough flexibility to remain competitive? The 1990s were a period in which senior managers refused to think through the long-term implications of losing secrets vs. the short-term political benefits of openness or declassification. In an enterprise setting, I suppose this would entail deciding what is worthy of protection and what senior managers might be willing to concede to potential competitors. The costs of lost or stolen data would have to be factored into such an equation. Flexibility might not be valued so highly if the loss of sensitive data undercut an enterprise's competitiveness.

You mention one instance in which a lab director simply crossed out classification markings on a document and released it to the media. We now know that the document in question contained sensitive information. What should corporate security managers do when confronted with similar situations? I assume you mean beyond updating his or her résumé and looking for a new job? Security managers can try a slow, steady process of educating the CEO to the potential downsides of lax security. I know of one Fortune 100 corporation whose world-famous CEO totally disdained security of any type and made nearly all corporate locations open campuses. He retired just before 9/11 and left his successors a staggering problem of how to protect corporate assets worldwide against terrorists determined to attack symbols of American economic power. His successors had to start from scratch to rebuild security at the corporation's facilities. ▶

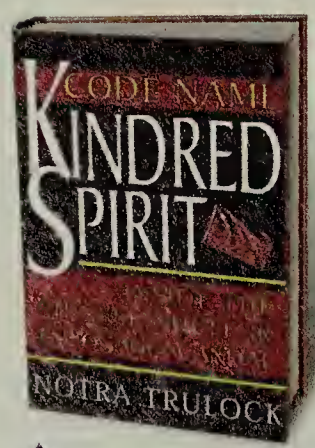
NOTRA TRULOCK

REUTERS NEWS PICTURE SERVICE

Age: 55

Claim to fame: Former director of intelligence at the U.S. Department of Energy during one of the nation's biggest espionage scandals involving nuclear weapons secrets

Currently: Associate editor at Accuracy In Media, a Washington-based media watchdog group



▲ Notra Trulock's book, *Code Name Kindred Spirit*, offers corporations a lesson in being vigilant about security.

MORE ONLINE

For the full interview with Notra Trulock, visit our Web site:

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NEWSMAKER

PAUL BRINKLEY, vice president and CIO at JDS Uniphase Corp., a $1.1 billion fiber-optics company in San Jose, has cut corporate IT expenditures by $35 million annually by outsourcing its Oracle applications (data center, product data management and help desk support) to an unlikely vendor – Oracle Corp. itself. JDS has used Oracle software for the past three years in application service provider (ASP) deals with Quest Software Inc. and Corio Inc.

Brinkley talked with *Computerworld*'s Jean Consilvio about JDS's decision to outsource to Oracle, which in an effort to bolster sagging sales has been lobbying customers to pay it to run and manage its own Oracle products.

What made you outsource to Oracle? We moved to Oracle as a turnkey solution provider for their application. They're providing software, hardware and integrated complete end-user services. This has enabled us to consolidate all of our [Oracle] support [for all of our global business operations], so there's a single point of accountability for end-user services. We also agreed to upgrade to 11i, and we didn't want to deal with multiple solution providers or independent support and consultant firms doing an 11i upgrade on the timeline we needed to pursue; we did it in six months globally.

What effect will this have on your IT folks? The company has always been dedicated to an outsourced IT model, so we didn't have internally a lot of people doing these functions. Two things help keep head count low: a single-instance environment . . . so we don't have people who support an ERP system dedicated to a single site or business unit, and [second] because it's outsourced.

The company first went with Quest as an ASP three years ago. Quest did well in some things and struggled in others, so other firms were brought in to supplement Quest. And it just grew in complexity.

How did you estimate the savings? We pay a fixed amount, and it's a [large] part of my IT budget. Our company has gone through a significant operational restructuring to centralize a lot of functions. This deal was the trigger that allowed us to rescale our IT operating expenses. We've gone through tremendous growth, from a very small company to a $4 billion company, and now with the telecom decline, we've radically had to scale [everything companywide] back down.

JOHN BERRY

ROI: Whose Job Is It, Anyway?

RECENTLY, I conveyed the elements of a comprehensive return-on-investment program to the IT organization of a small but fast-growing company. The presentation included how a financial forecast looked, how the company needed to plan for change when the metrics in the forecast hinted at it, and why the auditing of actual postinvestment returns was a good idea.

About two-thirds through, one of the senior IT fellows interrupted me, questioning the willingness of business units to adopt these practices. "Glad you asked," I said.

JOHN BERRY is an IT management consultant and analyst in Bend, Ore. He is currently writing a book about the measurement of intangible assets. Contact him at vision@according2jb.com

I turned the question around and asked why the IT group — curious enough about better practices in IT management to have me come in to demonstrate some techniques — couldn't evolve into a value-added business partner that could help business units with economic value management tasks.

For example, a business unit would request a custom or packaged application, and IT, working in partnership, would deliver an economic forecast, change management tactics and perhaps a method for quantifying the intangible ROI and a postinvestment audit capability.

The IT executive smiled, nodding in agreement. Could his response have been more out of politeness than conviction that what I said was tenable at his company? Yes, talk is cheap.

Overlooked but very much needed amid all the buzz about quantifying financial returns on IT investments are answers to some basic questions. Who is willing and able to roll up their sleeves and get into the mechanics of building a forecast? Who will build consensus for the metrics to be included in the forecast? Who will document the potential organizational and business-process change some software is sure to inject into the company?

In other words, who is going to champion a consistent, repeatable IT measurement program and see that it happens and thrives?

Theoretically, there is no reason why economic value management practices can't originate and become operational in the IT organization. But the politics of the situation say otherwise.

In reality, the broad trend has been for such a management course to originate in business units, which increasingly have control over discretionary IT budget expenditures. The IT organization's budget, meanwhile, is largely confined to life-cycle management expenditures, upgrades, replacements and maintenance.

However, with control comes accountability. Lines of business can chart their technological destinies, but senior management is also holding them accountable for the returns their investments deliver. This compels business units to manage the risks and uncertainties of their investment decision-making. This is accomplished by adding clarity to these decisions — economic forecasts, metrics construction, the whole measurement megillah.

Now, square the budgeting trends and related measurement responsibility with an equally important reality showing IT's genuine interest in busting out of its utility services role. In the case of this high-growth company, the IT group aspires to participate at a more strategic level.

Contemplate the tension: Budgeting realities are driving accountability (meaning ROI mania) to business units, while IT seeks to participate more fully in the strategic affairs of the company by playing a larger role in ROI measurement and related activities. The business side might very well wish to relinquish measurement to IT, but senior management is saying, "You want that $500,000 CRM application? Then you show me the value, since you have the budget."

As it turns out, this company's IT budgeting is centralized, not in defiance of the trend, but most likely because of its size. As its revenue grows, as its need for complex applications grows, it might decentralize budgeting too. Today, IT in this company is excited about the chance to lead a transformation effort that embeds forecasting and measurement in investment decision-making.

Business units that avoid the heavy lifting of IT economic value management, pinch yourselves. This scenario is likely not the future. ◗

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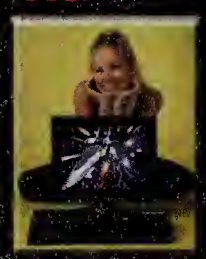

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New! APC solves top 4 rack problems.

TOP FOUR RACK-BASED PROBLEMS

	PROBLEM	SOLUTION
1	Cabling Nightmares	Additional enclosure depth for better cable management and power distribution
2	Hot Spots	Optimal cooling distribution and heat exhaust for rack environments
3	Blown Circuit Breakers	Monitoring of power and environment at rack helps avoid downtime
4	Brand Incompatibility	Vendor-neutral mounting backed up by "Fits like a Glove"* money-back guarantee

Benefit today from optimal cable management, effective cooling, and remote power distribution. The NetShelter® VX rack enclosure supports your entire data environment, including servers, networking and communications, and storage devices.

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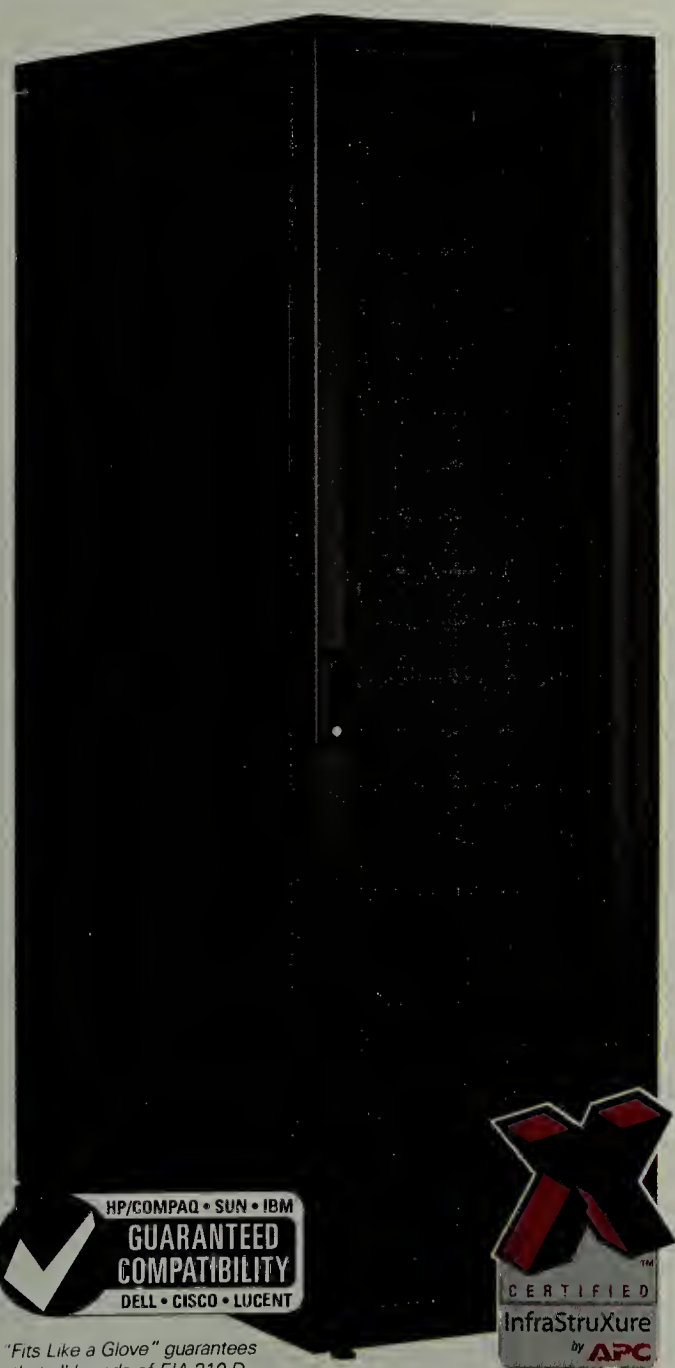

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Next generation, high-quality enclosures

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- Available in multiple configurations: 35.5" deep, 42" deep, beige or black

NetShelter® Open Frame Racks (X-CERTIFIED) [4-post only]

Economical solutions for wiring closets and networking applications

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2U rack-mounted fan unit distributes cool air to rack enclosure equipment.

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- Adjustable depth to fit most leading enclosures

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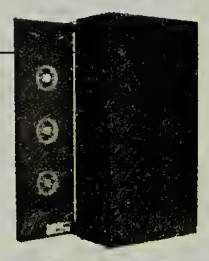

Heat removal for enclosures in IT rooms and data center hot spots

- Enables up to 7.5kW of power consumption in a rack, without taking up U space
- Automatic fan speed adjustment leads to greater energy efficiency
- Dual-power input cords allow the unit to attach to redundant power sources
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Distribute, monitor, and remotely control power in rack enclosures

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- **MasterSwitch®:** Advanced, remote power distribution and control. User configurable. Users can configure the sequence in which power is provided to individual receptacles upon start up

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Monitors environmental conditions in racks and rooms

- Sensors continuously monitor the temperature and humidity of environment
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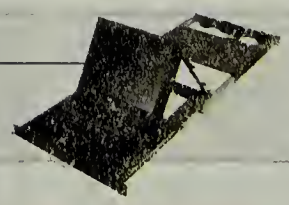
- Communicates information in a variety of formats to ensure that your application is supported

LCD Monitors (X-CERTIFIED)



Rack-mount LCD monitors save space in IT environments

- Provides optimal functionality while utilizing only 1U (1.75") of rack space

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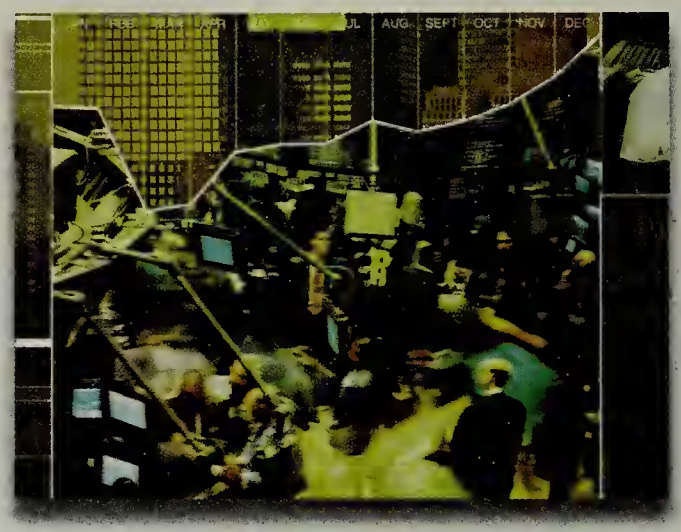
Advertising Supplement

IT CAREERS IN FINANCIAL SERVICES

Among the most aggressive industries using information technology to enable business is financial services. Despite the upheaval of the past two years, the industry continues to lean on information technology and its professionals to drive change in the future. Over the next 12 to 48 months, the priorities for the industry – whether a traditional banking institution such as Wells Fargo or E*Trade, which introduced online trading 20 years ago – fall into four categories: security, peer-to-peer networking, mobility and web applications.



The issue of security was evident when the Slammer worm hit the Internet in January, closing down ATMs across the country for at least part of the weekend. For E*Trade, which has the second largest automatic transaction machine network in the United States, that kind of problem is a killer. Peer-to-peer networking is an issue for Wells Fargo as it consolidates nationwide operations. And for Edward Jones, extending the business capability and service to customers through mobility, new web applications and security is a model for what most institutions face.

Rodney Gee, general principal over human resources in information systems at Edward Jones, has a short list in terms of priorities for IT professionals in the future. The base is technical skills, which at Jones translates to Java-based programming, database development, system programming and administration, and network and technical architecture. "We look for people who have demonstrated the ability to learn new skills," says Gee. "So if you don't have Java but have proven to be an excellent programmer in another language, we'll help you get that capability."

Edward Jones, headquartered in St. Louis, supports a world network of locations, and IT pros align to the businesses. "So it's important to be able to leverage the capabilities of a teammate," says Gee. "At Jones that is much more important than your abilities as a lone ranger. And, probably, the biggest thing needed before folks move on in their careers is understanding the bigger business context and how IT can enable that business model."

Keith Irwin, manager of learning and development at Wells Fargo Services, says creating this type of workforce encompasses myriad programs. His group provides more than 350 courses online. The courses are configured into maps that track with Wells Fargo's careers of the future. "There's no one thing that keeps me awake at night," he admits. "It's the full range. In financial services, we're still using mainframes, but we also are moving rapidly in the areas of web applications to deliver services to customers.

"That means we're working to cover all the bases because we can't afford to fall behind in any one."

IT Careers
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Today, The Nasdaq Stock Market® is the largest and fastest growing stock market in the United States, listing over 3,800 of the world's most innovative companies. We are currently looking to fill the following positions in Trumbull, CT:

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ALGORITHM DEVELOPMENT ENG -- Designs and develops pattern recognition algorithms for medical applications. Master's degree in Elec./Computer Eng. Will pay prevailing wage. Send resume to Ziling Huo, Beckman Coulter, inc. 11800 SW 147th Ave., Miami, FL 33196 or fax to (305)-380-3647.

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NET2S is a leading International Consulting and Engineering firm specializing in communications technologies. We are presently seeking to fill the following positions:

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Develop and implement marketing strategies. Manage sales life cycle including client presentations and negotiations. Oversee project management including deployment and roll out. Co-manage project center.

Must possess excellent communication skills as well.All positions require BS/MS degree with a minimum of 2 to 3 years of experience in the field. Must possess excellent communication skills as well.

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SOFTWARE ENGINEERS (12 positions): require Bachelor's or equivalent in Engineering/Computer Science/Mathematics/Science or closely related field with experience providing skills in described duties. Competitive salary and benefits. Provide on-site consulting in design, analysis and development of software applications for legacy systems in IBM mainframe environment; development and administration in Oracle, DB2, SQL Server and Sybase; e-commerce and web applications development in Microsoft, Java and related technologies; network management systems development with Netscape Server and related tools; SAP R/3 applications on Windows with DOS and ABAP/4 and related modules. 40% travel to client sites in the United States. Mail resumes to: Vice President, Y&L Consulting, Inc., 7550 I H 10 West, Suite 940, San Antonio, TX 78229.

Seeking qualified applicants for the following positions in Memphis/ Collierville, TN: Senior Business Application Analyst. Formulate/ define systems' scope and objectives based on user/customer needs and a good understanding of applicable business systems and industry requirements. Requirements: Bachelor's degree* in computer science, math, statistics, business or related field plus 5 years of experience in analyzing business systems and developing technical automated solutions. Experience with business case development and project management tools (e.g., Primavera Project Planner, TeamPlay, MS Project or MS Access) also required. *Master's degree in appropriate field will offset 2 years of general experience. Submit resumes to Sibi George, FedEx Corporate Services, 1900 Summit Tower Blvd., Suite 1400, Orlando, FL 32810. EOE M/F/D/V.

Telecheck Services, Inc., a Division of First Data Corporation, a company in Greenwood Village, CO specializing in check guarantee, has an opening for an Intermediate Software Developer to work in Houston, Texas and other unanticipated job sites in the U.S.. Engage in full life-cycle software development involving object-oriented design and development. Requires a bachelor's degree in computer science; experience implementing and integrating ORACLE products; and working knowledge of C, C++, Java, Shell Scripts, Windows 2000, SQL, and Unix. Respond by resume to Norm Barnett, First Data Corporation, 6200 S. Quebec St., Suite #2000 West, Greenwood Village, CO 80111 and refer to job #3963DE.

Software Engineer wanted at NY office of Empact Solutions to design, develop, test, implement and provide maintenance support for EyeQ software. Must have analytical, trouble shooting, and problem solving skills. Experience with Java, JSP, Servlet, ASP, Perl, and Win2000. Design and document capability with UML. Experience with use cases, class diagrams, sequence diagrams and state diagrams. Database knowledge with Oracle, DB2, and SQL Server/ Analysis. Hands on programming with EJB, J2EE, XML, and C++. Must have a BS in Computer Science or Engineering, and at least 2 years of experience. Send resume to NY Recruiter at careers@empactsolutons.com referencing code SENG.

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Sr Consultant (dynaSight/SAP specialist) for comp s/ware dvlpg, mktg & service co. in Wayne, PA for job in Rochester, NY. Duties incl.: dsgng & dvlpg web-based Business Intelligence (BI) applics & providing related implmtn svces. Extensive travel required. Reqs: Master's or equiv in Bus./Technology or related field. 5yr exp in job offd or 5yr exp in translating bus. info reqmts into reporting or BI solutions. Applicants must have significant SAP exp, SAP BW implmtn exp & dynaSight implmtn exp. Respond to: Michael Dieterle, Director of Professional Services, arcplan Inc., 900 West Valley Road, Suite 204, Wayne, PA 19087.

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The University of Kansas is seeking an accomplished individual to play a key role in our dynamic, service-oriented information technology environment. This new position leads the technical systems group responsible for the development and ongoing maintenance support of the enterprise communications systems for KU. As part of the NTS management team, the successful candidate will provide vision and technical guidance to ensure the effective and efficient utilization of communications technology at KU.

For complete information on the position, required qualifications, and application procedures, see www.nts.ku.edu or contact *Ann Ermey @ NTS; 1736 Engel Road, Lawrence, KS 66045 785-864-9310 or email aermey@ku.edu.*

Complete applications postmarked by April 1, 2003 will be given first consideration. EO/AA Employer.

Full-time Software Engineer Middleware Developer responsible for program design and analysis, coding, testing and implementation for numerous projects. Define applications architecture and document applications functionality expansion and customer integration. Develop applications requirement specifications and develop software and documentation according to established standards. Provide end-user support, identify and troubleshoot defects found. Work with Oracle, C++, PL/SQL, Java, MQ Series, MSQI, E-SQL. Must have a Bachelor's degree in Computer Science, Information Systems or related field. Educational and or work background must have included the above-referenced skills. Salary Competitive. Send resume to: Robbin Lee, United Parcel Service, 12380 Morris Road, Alpharetta, GA 30005. Employer will not sponsor visas for position.

Seeking qualified applicants for the following positions in Memphis/Collierville, TN: Senior Programmer Analyst. Formulate/define functional requirements and documentation based on accepted user criteria. Requirements: Bachelor's degree* in computer science, MIS, engineering or related field plus 5 years of experience in systems/applications development. Experience with Java, C++ and CORBA also required. *Master's degree in appropriate field will offset 2 years of general experience. Submit resumes to Sibi George, FedEx Corporate Services, 1900 Summit Tower Blvd., Suite 1400, Orlando, FL 32810. EOE M/F/D/V.

SR J2EE/IVR Developer. 2+yrs exp design, develop, & implement scalable platforms at least one of which must be on large scale telephony sys, J2EE, TomCat, Apache Edify & IVR. Submit resume to Tracy Smutko, Resource Mgr. NCS Technologies 242 Old New Brunswick Road, Piscataway, NJ 08854

Software Engineers & Programmers:

Analyze, design, test and implement specialize software applications for e-commerce, Web, Client Server technologies, Legacy systems and distributed apps. in Weblogic, Corba, Apache, Mainframe, ASP, J2EE, PB and related technologies utilizing appropriate RDBMS including Oracle and DB2. HR, Instcomp, Inc., 906 Lacey Ave., Suite #206, Lisle, IL 60536. EOE.

Software Engineer: Design, develop, implement, test the business applications in areas of data access, data extraction, conversion, migration, procedures, data modeling, quality assurance using Oracle 8.0, PL/SQL, Oracle Designer, Developer 2000 and Oracle relational database tools on a Unix system. Requires MS in Comp. Sci. Engg/Related field with 2 yrs exp or BS with 5 yrs exp. Wages: $90,000/yr, 40 hrs/wk, 8am-5pm. Send 2 resumes to: Case#200115737, Labor Exchange Office, 19 Staniford St. 1st Fl., Boston, MA 02114.

Job Code SSA. Manage web and eCommerce projects using VB.NET, ASP.NET, Visual Basic 5.0/6.0, HTML, DHTML, JavaScript, VBScript, ASP, XML/XSL, SOAP, COM/COM+, MTS, SQL Server 2000/7.0/6.0, Oracle, DB2, Office Object Model (VBA), Seagate Crystal Reports, IIS 5.0. System Analysis/Reviews, database design using ERWIN, quality issues using CMM levels. Maintain Ebix software: Ebix-One, Ebix-ASP, Ebix-Exchange, Ebix-SaleSource, Ebix-Mall and Elite. Microsoft certification as a solutions developer. BS + 2 yr. of exp. in software field (Requires 1 yr. exp. with Ebix software packages) OR no BS + 5 yr. of experience in software development.

Job Code SSBA. Analyze client b/z proc., project planning, software dev., QA & team mgmt. Conduct reqs. and system analysis, review b/z sols., and end user needs. System arch. & database dsgn., deploy and dev. software on Microsoft tech. like ASP.net and C#, Active Server pages, VB.NET/Visual Basic 6.0, VBScript, JavaScript, Microsoft Transaction Server, SQL Server 2000, COM/COM+, DCOM/MS.NET Remoting, XML/XSL, Rational Rose, data modeler like ERWINm, Windows 2000/NT and Intel Based machines. Maintain Ebix software packages: Ebix-One, Ebix-ASP, Ebix-Exchange, Ebix-SaleSource, Ebix-Mall and Elite. BS in CS + 2 yr. of exp. in software field (Requires 2 yr. exp. with Ebix software packages) OR no BS + 4 yr. of experience in software development.

Competitive salaries. Apply with Job Code to EBIX, 5 Concourse Parkway, # 3200, Atlanta, GA 30328 with proof of work authorization.

Senior Network Engineer req'd for CT telecom co. Must be CCIE and have M.S. or equivalent, 4 yrs. Practical experience required. NO TELEPHONE CALLS Please. Send Resume to: attn. Jim Florwick Globalcom LLC, P.O. 605,Old Greenwich,CT.06870

Sr Consultant (dynaSight/Hyperion Essbase-Oracle specialist) for comp s/ware dvlpg, mktg & service co. in Wayne, PA. Duties incl.: dsgng & dvlpg web-based Business Intelligence (BI) applics & providing related implmtn svces. Extensive travel required. Reqs: Master's or equiv in Bus/Info Systms or related field. 5yr exp in job offd or 5yr exp in translating bus. info reqmts into reporting or BI solutions. Applicants must have significant Oracle & Hyperion Essbase implmtn exp. Respond to: Michael Dieterle, Director of Professional Services, arcplan Inc., 900 West Valley Road, Suite 204, Wayne, PA 19087.

Software Developer
Full-time position in Wheaton, IL. In this position you will deliver quality code in a collaborative environment, as well as document and communicate technical and architecture information as needed. Required: Master's degree in Engineering, Computer Science or related field; 1+ year of experience in developing N-tier DNA application using ASP, VB.COM, DCOM, SQL, server, javascript, remote scripting; 6+ months experience in developing in Web Farm Environment; and 6+ months of development experience in ASP.net, VB.net, XML, XSL and Xpath. Contact miwinski@warrantycheck.com.

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Must possess a Bachelor's degree or its equivalent in Business Administration, Computer Science, Information Systems or a related field and relevant experience with SAP-Business Analysis skills in SD and HR modules, the development of custom database programs using Oracle, Visual Basic and SQL-based RDBMS, automated tools to automate SAP test script specifications and Software Project Implementation and Analysis.

Resume and/or cover letter must reflect each requirement above and specify reference code AD-GCD/GC0103 or it will be rejected.

Forward resume to: BI Staffing Center, PO Box 534, Waltham, MA 02454. Fax number: (781) 663-2431.
Email: BIPI@BI-careers.com

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- TIBCO/TRIARCH Systems Engineer
- Sr. Security Systems Engineer

All positions require BS/MS degree with a minimum of 2 to 3 years of experience in the field. Must possess excellent communication skills as well.

NET2S, 82 Wall Street Suite 400, New York, NY 10005; Fax: (212) 279- 1960; Phone (212) 279-6565; or Email: jobus-ny@net2s.com

Programmer Analyst. Experience w/ C++, VB, Java. Must have BS in CS, Comp. Eng., or EE. Must have authority to work in US. Send cover letter and resume to Jennifer c/o PCS at 1415 N. Dayton, Chicago, IL 60622.

Remedy Applications Engineer / System Administrator req'd for CT telecom co. Must have M.S. or equiv't + 3 yrs. exp. NO TELEPHONE CALLS Please. Send Resume to: attn. Jim Florwick Globalcom LLC, P.O. 605,Old Greenwich,CT.06870

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Prosoft Technology Group, Inc. is a nationwide professional software-consulting firm. We offer competitive salaries, full benefits and a team spirited, success driven environment.
The positions of Programmer Analyst (ERP) and Programmer Analyst (EAI/B2B Integration) require at least two (2) years of work experience. All other positions require at least one (1) year of experience in one or more of the following skill sets and also all positions require at least a Bachelor's degree in Computer Science or Engineering (any field).
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PROGRAMMER ANALYST (EAI / B2B Integration):
Web Methods (EAI and B2B Integration), See Beyond and Mercator
PROGRAMMER ANALYST (eSolutions):
SAP Portals (Top Tier), Web Logic, Web Sphere, iPlanet and J2EE Technologies
PROGRAMMER ANALYST (Knowledge Management):
Data Warehousing, Enterprise Reporting, Actuate, Cognos, Business Objects and Crystal Reports
System Administrators and DBA:
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Business Development Manager: Requires a Bachelor's degree in Business Administration or Engineering (any field) with at least one (1) year of experience in Information Technology.
ALL POSITIONS REQUIRE FREQUENT TRAVEL AND RELOCATION THROUGHOUT THE U.S. ONLY QUALIFIED U.S. WORKERS NEED APPLY.
Please mail your resume with Ref # Pete - 2003 to Attn: HR Manager, PROSOFT TECHNOLOGY GROUP, INC., 2001 Butterfield Road, Suite 1050, Downers Grove, IL 60515

SOFTWARE ENGINEERS (8 positions): require Bachelor's in Engineering/Computer Science/Mathematics/Science or closely related field with experience providing skills in described duties, at $65,000 per year; Senior Software Engineers (8 positions) with Master's and two years experience, at $70,000 per year. Provide on-site consulting in design, analysis and development of software applications for legacy systems in IBM mainframe environment; development and administration in Oracle, DB2, SQL Server and Sybase; e-commerce and web applications development in Microsoft, Java and related technologies; network management systems development with Netscape Server and related tools; SAP R/3 applications on Windows with DOS and ABAP/4 and related modules. 40% travel to client sites in the United States. Mail resumes to: YASH Technologies, Inc., Human Resources, 605 17th Avenue, Suite 1, East Moline, IL 61244.

Optimum Technologies seeks Software Engineers to design & develop complex s/ware applns using UNIX, Windows, C++, VC++, VB, PL/SQL, Unix Scripting (sed, ewk, grep) Linux Scripting, SS7, Oracle, SQL Svr & related tools. MS or eqvlnt in Comp Sci, Engineering, Business or a closely related field & min one yr exp req'd. Job in Woodridge, IL & other locations. Apply to HR, Optimum Tech, 1230 Golfview Dr., Woodridge, IL 60517. Fax: 630 985 7825.

Computers-Staff Leads needed. Seeking qual. candidates possessing MS or equiv. and/or rel. work exp. Part of the required rel. exp. must include 6 months working with PeopleSoft ERP, Oracle & DB2. Duties include: Design, develop & implement business solutions & applications; Create system conversions of legacy mainframe systems to PeopleSoft systems; Mentor junior tech. consultants. Must be willing to travel extensively & relocate as req'd. Exp. in SQR, SQL with UNIX & Windows platform preferred. Fwd. resume & ref. to: Cedar, Inc., Attn; HR, 25 Burlington Mall Rd., 4th Floor, Burlington, MA 01803.

Computer Programmer, Plan, develop, test, and document programs. Evaluate user requests for new and modified programs for business applications using Visual Basic 6.0, Microsoft SQL Server, Windows 2000/NT, and software automation for large retail supply chain managment. Swansea, SC location. 40 hrs/wk, 9AM-5PM. Competitive Salary. Send resume to: Primetech Systems, Inc., 1010 Green Tree Rd., Pittsburg, PA 15220.

PROGRAMMER-ANALYSTS needed at client sites to dsgn & dvlp interfaces & prgm modules using Sybase, Java, ESQL/CPP, Perl, Unix, Open client library & T-SQL; Write & sched jobs thru Autosys & Control-M; Access data thru DB-Artisan; Synchronize d/bases using Sybase replication server. Send resume to Global Consultants, 601 Jefferson Rd, Parsippany, NJ 07054.

Infobahn Technologies delivers innovative IT Solutions to business clients nationwide. We have immediate full time oppurtunities for Software Engineers. All applicants must have a minimum BS in Comp.Sci.Engg. or related field plus 2 years of experience. Send resume to: Infobahn Technologies, (HR) 288 Walnut St. #410, Newton MA 02460.

Software Engineer - Mohegan Lake, NY. Require experience in designing &developing commercial applications using Java, XML, Developer, Oracle, Data Warehousing & Oracle Applications. Relocation within USA possible. Attractive compensation package. Send resume to Siva, Globytes Technology Solutions Llc., 691 Panorama Drive, Mohegan Lake, NY 10547

Senior Software Engineer responsible for research, design and developing computer software systems. Will conceptualize, design and construct a framework for business application software. Will use various platforms including COBRA/J2EE and C++, Java and object oriented design. Must have 5 yrs of exp. in job offered. Salary Competitive. Send resumes to: Kate Elliott, Mentisys, Inc.1545 Peachtree St., Ste. 340 Atlanta, GA 30309.

Supermarket Retail Bsns seeking: Software Engineer w/MS Degree & 1 year exp. to: analyze business needs for users in the dept. of consumer goods. Custom Des. & maintain system using Business Basic, FoxPro, VB 5, SQL Svr, FRX, Crystal Reports & Win NT on mainframe (Unisys A series) to consolidate data for reporting. Travel abroad & within US to gather user req., specifications & for Imp. of software. Exp. in retail busn. is must. Resume to: Attn: Don Winant, MIS-8810, Gristede's Foods, Inc., 823 11th Ave, NY, NY 10019.

Sr. Database Admin. Design, analyze, test, maintain & improve logical & physical databases. Responsible for backup, recovery & tuning of databases. Calculate optimum values for database parameters & system analysis. Use Oracle, SQL server, &/or related skills. Req 4 yrs exp in job/4 yrs exp as Systems Analyst & Consultant or Asst. Syst. Anal. Or Sr. Programmer & Programmer. Jobsite: West Greenwich, Rhode Island. Send ad & resume: Yen C. Chong, Amgen Inc., One Amgen Center Dr., Thousand Oaks, CA 91320-1799. Include Ad# 02-412FV.

Logos, a Bible Software Company, seeks S/w Dsgn. Analyst for HQ office in Bellingham, WA. DESC: Dsgn & dev. multilingual info. retrieval sys. for use in computer reference works util. C++, ATL, COM, HTML, JScript, & XML on Win. Dev. implementations of info. retrieval approaches including auto summarization, term conflation, doc. clustering, cross lang. searching, & topic extraction. REQS: BS in Engr, CS, Math, or Physics + 6 mos. exp. coding progs. & apps. in C++ for Win. Prem. sal. + benes. Pls. reply to E. de Kock, Job# LR-101, 1313 Commercial St, Bellingham, WA 98225.

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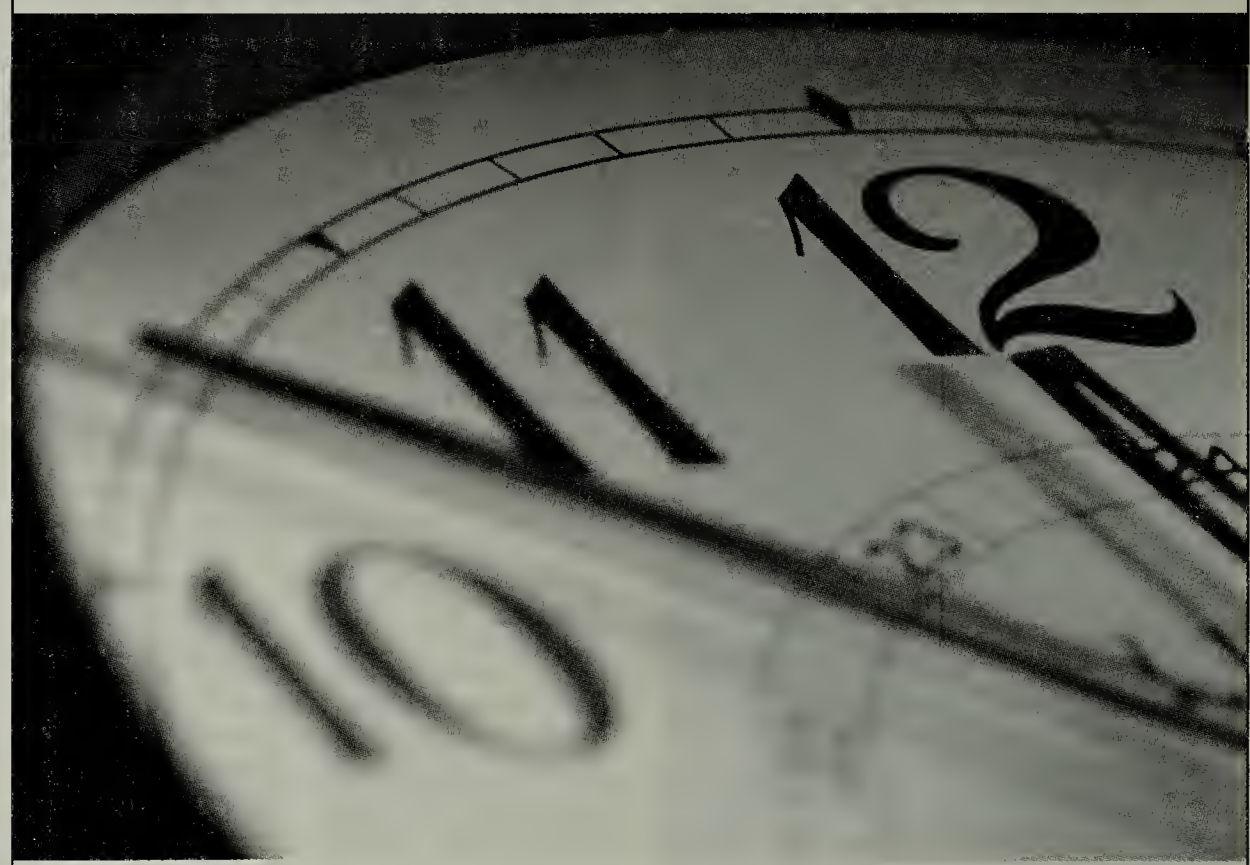

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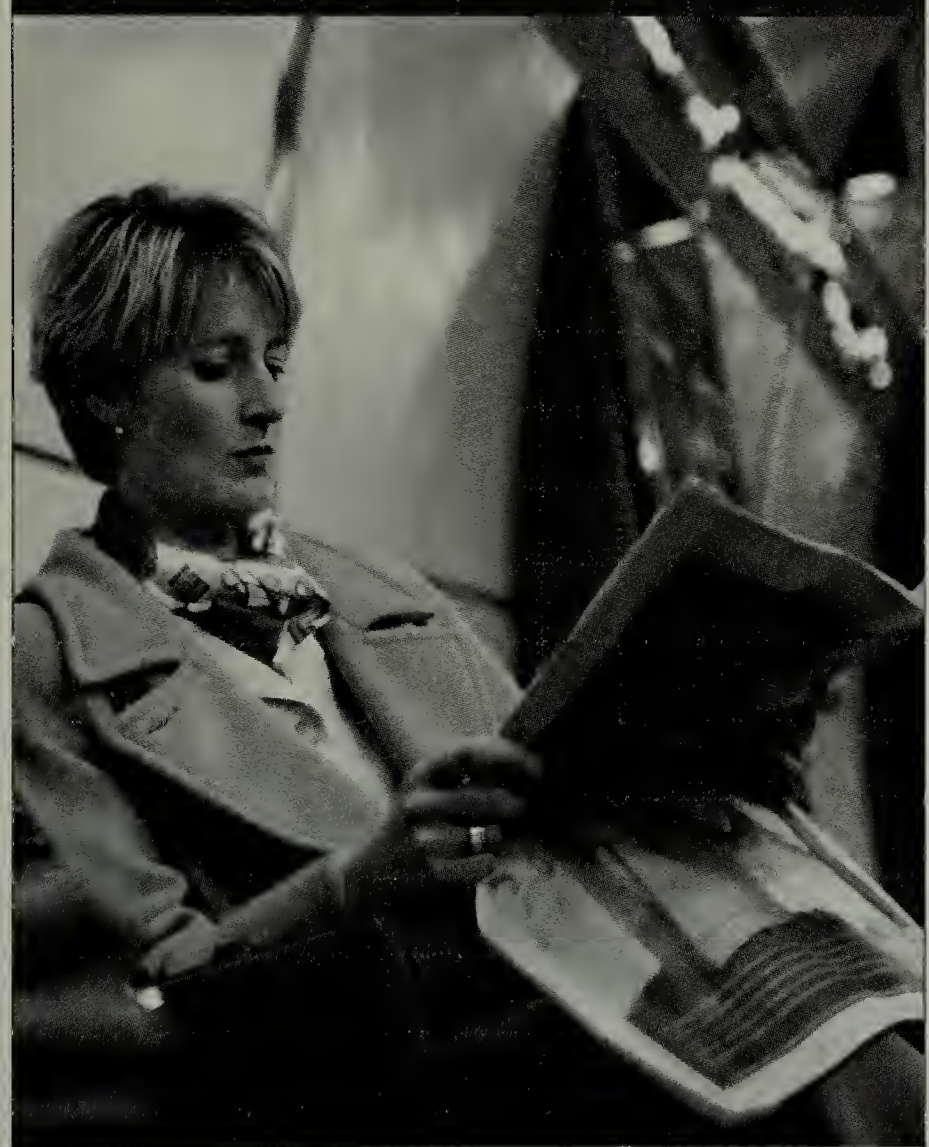

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Maryfran Johnson, editor in chief
(508) 820-8179

DEPARTMENT EDITORS

Don Tennant, News editor ..... (508) 620-7714
Craig Stedman, assistant News editor ..... (508) 820-8120
Julia King, Management editor ..... (610) 532-7599
Jean Consilvio, assistant Management editor ..... (508) 820-8562
Tommy Peterson, Technology editor ..... (508) 620-7729
Mitch Betts, director, Knowledge Centers ..... (301) 262-8243

REPORTERS

Bob Brewin, mobile computing/wireless; Intel PCs and servers; health care ..... (505) 425-3551
Matt Hamblen, networking; network systems management; e-commerce ..... (508) 820-8567
Thomas Hoffman, information economics; IT investment issues; energy ..... (845) 988-9630
Lucas Mearian, financial services; storage; IT management ..... (508) 820-8215
Linda Rosencrance, general assignment; transportation/carriers ..... (508) 628-4734
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Frank Hayes, senior news columnist ..... (503) 252-0100

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David Ramel, e-mail newsletter/online editor at large ..... (508) 820-8269
Brian Sullivan, online editor at large ..... (508) 620-7780
John R. Brillon, associate art director ..... (508) 820-8216
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ADMINISTRATIVE SUPPORT

Linda Gorgone, office manager ..... (508) 820-8178
Cheryl Dudek, administrative assistant ..... (508) 820- 8178

CONTRIBUTING COLUMNISTS

John Berry, David Foote, Pimm Fox, Michael Gartenberg, Dan Gillmor, Thornton A. May, David Moschella, Bart Perkins, Nicholas Petreley

CONTRIBUTING WRITERS

Mary Brandel, Amy Helen Johnson, Russell Kay, Sami Lais, Kathleen Melymuka, Deborah Radcliff

GENERAL INFORMATION

TELEPHONE/FAX

Main phone number .... (508) 879-0700
All editors unless otherwise noted below
Main fax number ..... (508) 875-8931
24-hour news tip line... (508) 620-7716

E-MAIL

Our Web address is **www.computerworld.com.**
Staff members' e-mail follows this form: **firstname_lastname@computerworld.com.**
For IDG News Service correspondents: **firstname_lastname@idg.com.**

LETTERS TO THE EDITOR

Letters to the editor are welcome and should be sent to: **letters@computerworld.com.** Include your address and telephone number.

MAIL ADDRESS

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BEA

Mass.-based Giga Information Group Inc. Rymer said the tool's initial version served as a proof of concept of BEA's overall design of an event-based Java development environment similar in intent to Microsoft Corp.'s Visual Basic. He predicted that the new tool will have a substantial effect on developer productivity.

Even in the tool's early incarnation, some companies found benefit. Richard Lynn, vice president of global applications at Pfizer Inc.'s pharmaceutical group, said his division was able to set aggressive timetables with the outsourcers that develop its applications, knowing that the BEA tool gave them added flexibility to make changes.

Lynn said the new tool will provide more benefits, since developers will no longer have to "Alt-Tab" between applications, and they will be able to more easily reuse code.

BEA is promoting its new WebLogic Platform as a way to converge integration and custom application development. Kapoor said the adoption of integration brokers has been limited, but he hopes WebLogic Platform 8.I, with its newly unified architecture, will make integration more mainstream by reducing the complexity, cost and time needed for such projects.

So far, BEA has made its mark as an application server vendor, vying with IBM for the top spot in market share. But BEA has struggled for recognition in the application integration space.

Thomas Murphy, an analyst at Stamford, Conn.-based Meta Group Inc., said he thinks that as developers become more productive using the new suite, the appeal of BEA's integration products will increase.

Murphy said he expects platform vendors such as BEA and IBM to eventually provide all of the integration tools that most companies need, pushing to niche vertical markets the vendors that specialize in integration brokers.

Jon Derome, an analyst at The Yankee Group in Boston, said that in the past 10 months, he has noticed that IBM and BEA have been turning up on users' short lists for integration projects, alongside integration broker vendors such as webMethods Inc. and Vitria Technology Inc.

Derome said the combined application server/integration broker offering can make a lot of sense for companies with complex integration challenges involving multiple legacy or packaged applications and Web applications.

Just because BEA is promoting the new products and new versions doesn't mean users will be rushing to get them. Bear, Stearns & Co., for instance, has major financial applications running on BEA's WebLogic Server.

Most of the applications are running on Version 5.1, and Bear, Stearns is looking to convert to 7.0, said Sue Picus, managing director in the architecture office at the New York-based company.

"We don't just drop everything and convert," said Picus, noting that it costs money to port code to a new version and to retest the complete system. "We tend to upgrade only when there's a need."

WebLogic Upgrade

BEA Systems' WebLogic Platform 8.1 includes:

WebLogic Server 8.1 – Improved performance, enhanced clustering and monitoring, support for Web services security and reliable messaging, simplified development and ease of administration.

WebLogic Workshop 8.1 – Integrated development environment that can be used with all products in the WebLogic Platform; includes additional and extensible controls for connecting to database and back-end resources; provides graphical designer for Java Server Pages, portals, business process management and data transformation.

WebLogic Integration 8.1 – XQuery language for data access and transformation, XML-based workflow language to simplify business process automation, enhanced message broker and guaranteed delivery services.

WebLogic Portal 8.1 – Support for Java portlet (JSR 168) and content repository (JSR 170) standards, content management and search capabilities, simplified integration of Web resources.

Note: WebLogic Server is due for general release in the spring. The Workshop, Integration and Portal products are due in the summer.

SOURCE: BEA SYSTEMS INC., SAN JOSE

Continued from page 1

IBM

a lot of careful upfront analysis before adoption.

"There is still some confusion. This is still tricky for some users," said Marcy Nechemias, an IBM pricing manager. "But the overall message here is that WLC is here to stay." She added, "There have been some rumors that IBM is going to discontinue WLC. Those are completely untrue."

Hewitt Associates LLC, a human resources outsourcer in Lincolnshire, Ill., has been using WLC since November 2001. The company is saving approximately 25% in monthly mainframe software licensing costs, said Dan Kaberon, Hewitt Associates' Parallel Sysplex manager.

"It was a good deal on the first day of the first month, and it has become easier to implement and more valuable for us to exploit with every change that IBM has made," Kaberon said.

In many instances, companies aren't moving to WLC simply because they see little benefit in it, said Stan King, president of Information Technology Co., an IBM business partner in Falls Church, Va. None of the 65 data centers that are directly supported by Information Technology has adopted WLC, King said. In all 65 cases, mainframes and associated software are being used at full throttle in production environments. Such shops won't see the same benefits from WLC, which favors users that don't fully max out capacities or those that have variable workloads, King said.

"There can be tremendous saving in this for those who own application development shops or are using mainframes on a limited basis or have brand-new requirements," King added.

Nechemias said IBM will work with users to understand specific concerns and address them where possible.

For instance, in response to user demands, IBM has made changes in the way usage is defined and measured under WLC. More recently, IBM discontinued plans to develop a license manager technology that was to have been used with z/OS, after users complained that it was too intrusive and complex to install.

In the same vein, IBM is currently working with users to clarify issues related to a four-hour rolling average metric IBM uses in some cases to measure software usage, Nechemias said.

"We are just dotting the *i*'s and crossing the *t*'s" to clarify things for users, Nechemias said. Later this year, IBM plans to highlight several customer case studies showing how early users who have implemented WLC are taking advantage of it, she said.

IBM's move to educate users about WLC comes at a time when barely 40% of all z/OS users have adopted the pricing model, despite its touted benefits.

"In terms of an adoption rate, one of the gating factors is that a lot of users are running z/OS in a mixed environment" with OS/390, said Mike Chuba, an analyst at Stamford, Conn.-based Gartner Inc. That makes WLC hard to implement, he said.

Another major factor is that WLC's benefits can vary widely depending on the overall capacity of installed mainframes and the applications that run on them, so users need to do the necessary analysis before making a move, Chuba said.

Still Committed

IBM's Workload License Charge allows users to:

- **Pay for mainframe software based on workload-capacity requirements.**
- **Upgrade hardware without necessarily incurring associated increases in software fees.**
- **Handle sudden workload spikes without paying extra for them.**

For instance, a mainframe user with less than 1,000 MIPS installed is unlikely to see much of a price benefit and is probably better off with current Parallel Sysplex licensing models, Chuba said. On the other hand, a user with more than 1,000 MIPS running multiple software packages could benefit substantially by moving to WLC, he said.

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Offshore Face-off

NERVOUS ABOUT OFFSHORE OUTSOURCING? You should be — and not just because offshoring has just become the favorite theme of the usual IT-analyst suspects. Last week at *Computerworld*'s Premier 100 conference, some panelists were throwing around cost numbers, like 8 cents on the dollar for offshore IT work. Is that realistic? No. Will it get your CEO's attention? You bet.

So ask yourself this: How much of my IT shop's work doesn't require "face time"? That should give you a pretty good idea how much of your work might be shipped off to Bangalore.

Along with a pretty good idea of just how obsolete you've become.

Not obsolete as in, "You're obsolete because what you do can be done more cheaply offshore." But as in, "You're obsolete because what you do doesn't meet the needs of the business any longer."

Does that sound too simple? Think about it: Business is about face time. Every good executive, manager and salesman knows that. And if IT's top priority is to align with business needs, how well we're aligned should show up in our face-time numbers.

Besides, what a business needs from its IT shop today isn't technology. Technology is easy to buy. Hardware and software vendors deliver it by the truckload. Sure, IT shops were once in the technology-making game. We routinely wrote big enterprise applications and even operating systems. But those days are long gone.

What the business needs isn't even the technical smarts to get the technologies working together. Specialist consultants can get an SAP installation going faster than internal IT people can, or bring new multitier middleware online with fewer problems than you'd have trying to dope it out with in-house talent.

What the business needs is the ability to do business better, faster and more effectively. And what the business needs from IT is to make sure technology makes the business better, faster and more effective.

So face time is bound to be a telltale marker. You can't understand a user's business problems without spending time watching, listening, asking questions and clarifying answers. That takes face time.

You can't make certain that some big, new supply chain system will actually make the business more agile and effective unless you check out your assumptions with warehouse and logistics people and suppliers. You can't be sure that a CRM system will help salespeople write more orders until you get a view through the eyes of those salespeople. That's face time and more face time.

And you can't know how well systems are actually serving the business without spending time face to face with the people using them.

It's grim but true: If corporate IT shops think IT is all about making technology, they can't compete. Our huge homegrown Cobol systems couldn't compete with SAP and PeopleSoft. And our teams of heads-down, cubicle-bound programmers working on big, well-specified applications can't compete with teams in India and Russia, where discipline is higher and the pay is much lower.

Anything we can do isolated in our IT shop cubicles, they can do in their offshore cubicles — and almost always faster and cheaper.

But they can't do face time. And they can't really know our business and put IT fully into its service. And those are the things the organizations we serve need from their IT shops today.

All that face time and business focus might not be what we'd prefer. It may well not be the reason we wanted to get into IT in the first place. It may even scare some IT people.

But that's what we're needed for today. And offshoring is just another reminder that the business *does* need us — but we have to do what the business needs.

Or face becoming obsolete. ▶

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

See a PIN and Pick It Up . . .

Hospital's new computerized transcription system requires a PIN for access, but one older doctor can't manage to log in. "I didn't have time for the instruction class – how do I do this?" he asks help desk pilot fish. Fish walks him through it, but doc complains, "It isn't taking my PIN number." Are you sure it's the right one? fish asks. "I have two, Visa and MasterCard," doc says. "Neither one worked."

SHARK TANK

Them

Pilot fish reviewing backup policy is surprised when sysadmin tells him his group doesn't store backups off-site. What if there's a disaster? fish asks. "If there's going to be a disaster, whoever lives the farthest away takes the backup tapes home," sysadmin says. But what if it's an *unexpected* disaster? fish asks. "Oh," sysadmin tells him, "they'll always let us know in advance if there's going to be a disaster." Says fish, "I didn't have the guts to ask who 'they' are."

No Secrets Here

Pilot fish quits his county government job but still has his e-mail account to help during the transition. Then he receives a message from a new IT guy, asking all users with remote access for their phone numbers, log-ins and passwords. "I hoped all the users I had repeatedly schooled in security would refuse to respond," says fish. But one department head not only e-mails his password, but also clicks on "Reply to all," fish says – "so every user in the county got the message."

Sure, That Should Fix It

This not-for-profit group has constant IT troubles and an IT guy who keeps spending money without fixing the problems. So the organization's president sets up an IT advisory board to come up with a plan, says pilot fish on the board. But in-house IT guy resists implementing the new plan – so much that he's fired. The result? "The president hires back the IT guy as a consultant at a better rate to fix the problems he didn't fix as an employee," sighs fish. "Go figure."

If at First . . .

User ignores the requirements listed on the box of this CD burner – after all, how different can Windows 98 Second Edition be from the regular version of Windows 98 on his laptop? Now it won't boot properly, so he tries using the Windows ME disk from his daughter's PC to repair the damage. "Fortunately, I was able to undo most of the mess he made," says IT pilot fish. "Then he asked, 'After you reload everything, do you think I can try to hook up that burner again?'"

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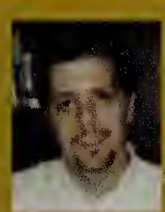
Standards: Which Fits All?

Scott Dinsdale, Executive Vice President, Digital Strategy, Motion Picture Association of America
Assert your Right(s): The Relationships Between Identity and Security

Phil Wiser, CTO, Sony Music Entertainment
The New OSI: Business Process Integration

KEYNOTE SPEAKERS:

Adam Bosworth,
Vice President of Engineering
BEA Systems
Future Traction: The Technology Roadmap and Your Enterprise



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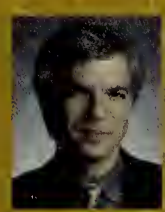

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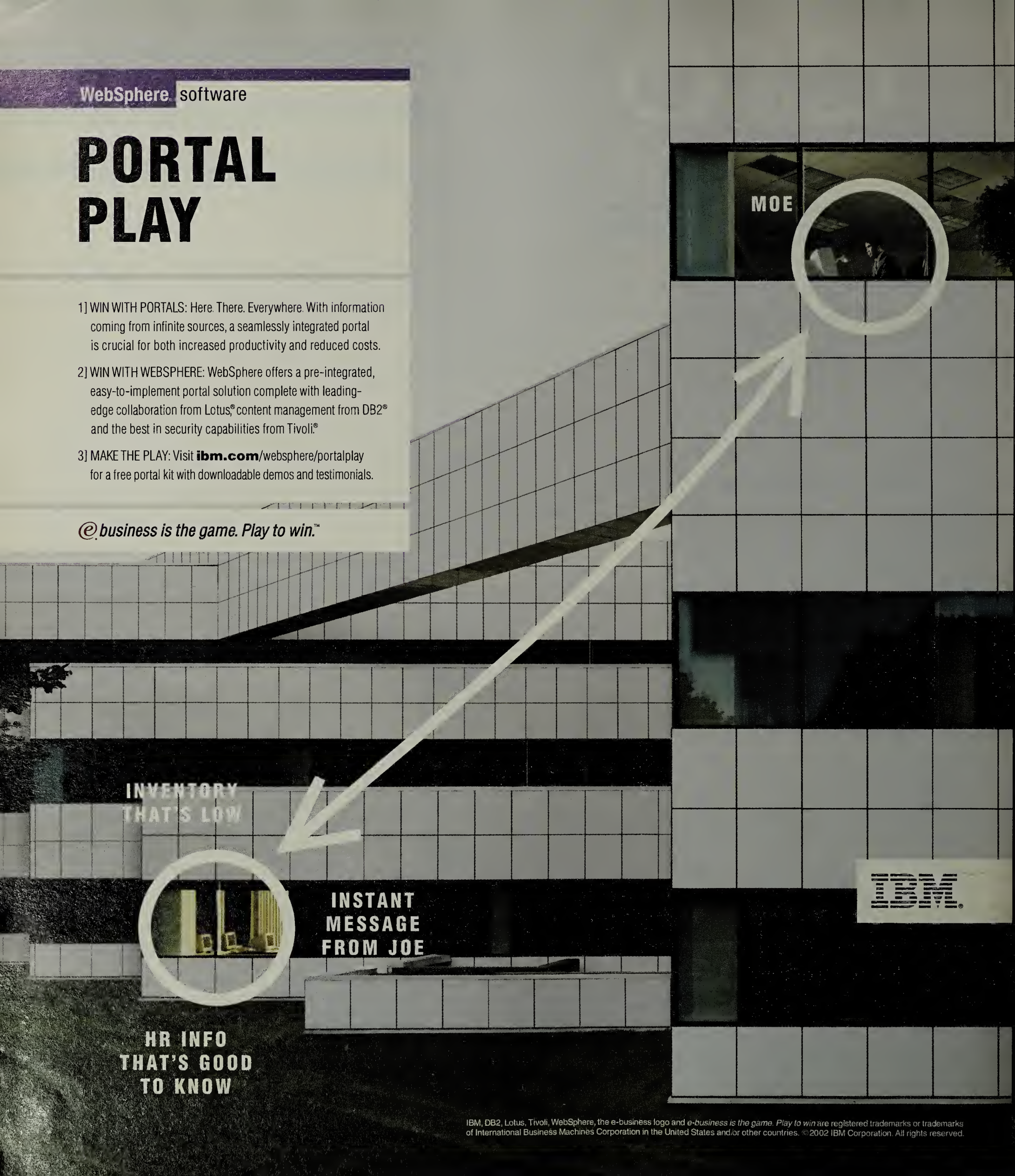

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